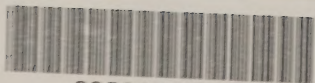


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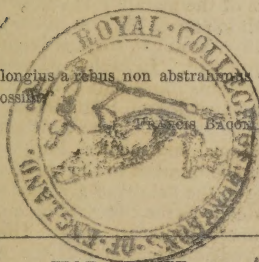
OF

MENTAL SCIENCE

(Published by Authority of the Medico-Psychological Association).

EDITED BY
HENRY MAUDSLEY, M.D.,
AND
JOHN SIBBALD, M.D.

"Nos vero intellectum longius a rebus non abstrahimus quam ut rerum imagines et
radii (ut in sensu fit) coire possint."



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"IN adopting our title of the *Journal of Mental Science*, published by authority of the *Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the terms, mental physiology, or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid, for although we do not eschew metaphysical discussion, the aim of this *Journal* is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease are not less questions of mental science in its practical, that is, in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our *Journal* is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow men, may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science, with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—*J. C. Bucknill, M.D., Lond., F.R.S., Lord Chancellor's Visitor.*

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Annales Médico-Psychologiques; Zeitschrift für Psychiatrie; Vierteljahrs-schrift für Psychiatrie in ihren Beziehungen zur Morphologie und Pathologie des Central Nervensystems, der physiologischen Psychologie, Statistik und gerichtlichen Medicin, herausgegeben von Professor Dr. Max Leidesdorf und Docent Dr. Theodor Meynert; Psychiatrisches Centralblatt herausgegeben von Vereinen für Psychiatrie und forensische Psychologie in Wien, Redigirt von H. Brer, M. Leidesdorf und Th. Meynert; Archiv für Psychiatrie und Nervenkrankheiten, herausgegeben von Dr. L. Meyer und Dr. C. Westphal; Correspondenz Blatt der deutschen Gesellschaft für Psychiatrie; Irren Freund; Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali; Annali Frenopatici Italiani Giornale del R. Manicomio di Aversa e Della Società Frenopatica Italiana Diretti dal dott. Car. B. G. Miraglia; Medizinische Jahrbücher (Zeitschrift der K. K. Gesellschaft der Aerzte in Wien); Rivista di Discipline Carcerarie in relazione con l'Antropologia, col Diritto Penale, &c., diretta Da Martino Baltram Scalia; the American Journal of Insanity; the Quarterly Journal of Psychological Medicine, and Medical Jurisprudence, edited by William A. Hammond, M.D. (New York); the British and Foreign Medico-Chirurgical Review; the Journal of Anatomy and Physiology, conducted by G. M. Humphry, M.D., F.R.S., and Wm. Turner, M.B., F.R.S.E.; the Dublin Quarterly Journal; The Lancet; Medical Times and Gazette; The Practitioner, a monthly Journal of Therapeutics, edited by F. E. Anstie, M.D.; the Medical and Surgical Reporter, a weekly Journal, by S. W. Butler, M.D.; the Medical Times of Philadelphia. Also the Morningside Mirror; the York Star; Excelsior, or the Murray Royal Institution Literary Gazette.

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PART 1.—ORIGINAL ARTICLES.

Observations on General Paralysis of the Insane and on the Morbid Changes found on Post-mortem Examination in the Spinal Cord.—By ROBT. BOYD, M.D., F.R.C.P., President of the Medico-Psychological Association.

(Read at the Seventh Quarterly Meeting of the Association, at the Medical Society's Rooms, Jan. 31, 1871.)

The following observations are mainly the result of the author's experience during twenty years in the Somerset County Asylum; many of them have appeared from time to time in his annual reports of that institution.

In the first annual report for 1848 it is stated that the *general paralysis of the insane*, a very fatal complication of insanity, was found to have been in fatal cases dependent on, or accompanied by, inflammation of the spinal cord. This has in a great degree guided the treatment, and one of the cases seemed to be benefited by cupping, repeated blistering of the spine, &c. The patient, from his importunity, was probably allowed to get up too soon, and he had a relapse and died. On examination after death, extensive inflammation of the membranes of the spinal cord and brain was found to exist; also inflammation of the lungs, which so frequently cuts short life in those long confined to the recumbent position. It is remarkable that percussion over the spine did not give any evidence of pain, but on the application of a hot sponge pain was immediately manifested.

Previous experience in a very extensive and varied field of observation at the St. Marylebone Infirmary, and with the co-operation of some very able and accurate inquirers, led the writer to the conclusion—which remains unchanged—that so far as our means of observation have existed, we have been unable to detect any special disease in the brains of the insane.

With respect, however, to *general paralysis or palsy*, it is again stated in the second annual report of the Somerset Asylum for 1849, that subsequent *post-mortem* examinations have confirmed the observations in the previous report, that fatal cases were found to be accompanied by, and probably dependent on, softening of the spinal marrow, frequently combined with inflammation of the membranes and fluid in the ventricles of the brain. The attention of pathologists is called to this important subject, as by no English writer has any allusion to it been made. The report goes on to state:—Although so little seems to be known respecting the pathological anatomy of general paralysis, which has of late years been recognised as a distinct, frequent, and most fatal disease of the insane, it results from my observation that there is no affection of the nervous centres occurring in insanity which presents so well marked and constant morbid changes; and these are seated in the spinal cord, although the brain or membranes are commonly implicated. These changes are chiefly inflammation of the cord itself or its membranes* (meningo-myelitis), thickening and preternatural adhesions of the arachnoid, softening, induration, enlargement, or atrophy of the spinal cord itself. In the brain were found thickening of the arachnoid membrane, with fluid at the base of the skull and in the ventricles and spinal canal, and a roughness from crystals (P) as if minute particles of sand were sprinkled on the floor of the fourth ventricle, and sometimes to a slighter extent also on the lining membrane of the lateral ventricles. It may further be observed that general paralysis or palsy sometimes precedes the mental derangement. This would occur where the spinal cord first became diseased, and disease afterwards attacked the brain. Such cases originating in the spinal cord are most likely to be checked if detected early. General paralysis is, however, most frequently preceded by some form or other of insanity, and is commonly in such cases the certain forerunner of a more or less speedy and fatal termination. It must continue to be so unless a more precise knowledge of its true nature should lead us to a corresponding improvement in its medical treatment.

The acute cases of palsy—or those in which this disease

* Mr. Gulliver, having had several specimens of spinal cord in cases of general paralysis submitted to him, states (M., vol. iv., p. 364.), "In December, 1850, I examined the lower part of the spinal cord carefully. The central softening is most distinct, having all the peculiar characters in its ultimate structure well known to belong to this affection. See Bennett's papers and my notes to your contributions. Edinburgh Medical and Surgical Journal, No. 156."

was of short duration and death ensued quickly, were distinguished by softening of the spinal cord, and in one case by enlargement of it. In the last of these fatal cases which took place in that year the symptoms of palsy only existed for four or five weeks; death occurred rather suddenly, after a fit. There was softening of the spinal cord and a considerable quantity of fluid in the ventricles of the brain.

The chronic cases of palsy, those in which the fatal termination did not occur for several months, were distinguished by induration, sometimes by atrophy of the spinal cord, and by thickening of its membranes.

There were in 1848 four fatal cases, and in 1849 seven fatal cases in males; in females, there was one fatal case in each of those years.

In 1850 there were seven fatal cases of general paralysis in males and four in females. In one female the disease appeared to be caused by a fibrous and fatty tumour, proceeding from the upper part of the spinal cord. In the other cases the morbid changes were wasting of the spinal cord, inflammation, with softening and induration of its substance, as well as inflammation, preternatural adhesions, and thickening of its membranes. These changes were generally connected with similar changes in the brain and its membranes.

A striking example of general paralysis occurred in a male who died at the close of the year. He was a weaver, aged 48, and was admitted into the asylum in June, until which time he had worked at his trade, but had recently spoiled forty yards of cloth, and had become violent in his conduct. His wife stated that for six months prior to his mental derangement she observed he rather tottered in walking, that his lips and tongue quivered, and his articulation became indistinct; afterwards he was wont to laugh at trifles, and had the appearance altogether of an intoxicated person. These symptoms gradually increased after he was placed under my care. He was of a ruddy complexion, very cheerful, and anxious to go out into the fields. A month before his death he had an attack of diarrhœa, of which he soon got better; but ever afterwards his strength failed, and he was confined entirely to the house. On the 12th December he was seized with violent convulsions, principally affecting the right side; these continued without abatement or relief from treatment for four hours, when he died. On examination after death, there was found abundant evidence of chronic inflammation

of the membranes of the brain, and of chronic inflammatory softening of the brain and spinal cord. It was observed that the inflammation appeared to have been more intense in the ventricles of the brain. The primary symptoms, as stated by his wife, would indicate that in this case the disease commenced in the spinal cord and extended to the brain.

In the year 1851 there were seven cases of general paralysis in males and one in females, accompanied by the usual inflammatory softening and sometimes induration of the spinal cord, and generally of a part of the brain itself. In most cases the disease appeared to have originated in the brain, the mental faculties having been observed to be weakened before the paralytic symptoms manifested themselves; in some instances the paralytic symptoms were first observed, and the mental weakness succeeded. The last of the female cases but one, that was fatal during the year, is singular. She had been a cripple for several years, her knees firmly contracted; when sitting up they were on a level with her chin, and her heels close to the backs of the thighs. The lower position of the spinal cord, to the extent of $1\frac{1}{2}$ inch just above the tail continuation, was dark coloured and softened; a portion of it was submitted to microscopical observation by Mr. Gulliver, who, without knowing anything whatever of the case, described it as differing from the inflammatory softening most commonly occurring with the characteristic exudation corpuscles in the cases of general paralysis. He found that the ultimate nervous structure was merely disintegrated or broken down—a simple solution of continuity of which Dr. Bennett has described examples in the brain.

In 1852 there were seven cases of general paralysis in males and four in females. In the report for that year it is stated that the fatal cases from this complication were found to be accompanied by disease of the spinal cord, the result of inflammation in which the ventricles and membranes at the base of the brain were generally implicated. Further experience corroborates this statement, and it has rarely happened that there could not be detected a sufficient amount of disease in the spinal cord or base of the brain to lead to the fair presumption that the symptoms were to some extent dependent on this cause. In addition to the evidence afforded by a *post-mortem* examination, a portion of the diseased parts was in most instances subjected to a microscopical examination by Mr. Gulliver, who found that the “exudation cor-

puscles" were most frequently present in the spinal cord itself, and were similar to those delineated and described by Dr. Bennett in his paper on inflammation of the nervous centres.*

In 1853 there were nine fatal cases of general paralysis in males, accompanied by inflammation of the spinal cord.

From the report of 1854 it appears that ten of the deaths, eight males and two females, being 17 per cent. of the mortality for that year, were from *general paralysis*. The dura mater was firmly adherent to the skull in one male, the arachnoid membrane was thickened in one male, the cerebral ventricles contained an unusually large quantity of fluid in four males, there was congestion of blood in the brain in two males, and in one of these the brain was very large, weighing 57 ounces. Disease of the spinal cord, which appeared to be the result of inflammation, was found in all the cases; the spinal cord was unusually red in one case, softened in four, preternaturally firm in three, and in one the spinal canal contained a large quantity of fluid. In the two females the spinal cord was softened, and in one case in which it was subjected to microscopical examination "exudation corpuscles" were evident in it, also in the brain; in this case, too, the brain was wasted, and nearly half-a-pound below the average weight. In the other female there was effusion of blood on the brain and atheroma of the cerebral arteries, and it was a quarter of a pound above the average weight. In those cases which were of longest standing, the brain was usually wasted, and below the average weight; in two cases weighing less than 41 ounces, whereas in some cases of a few months' duration, the brain was considerably above the average weight of 46 ounces in the male; in the cases collectively the average weight of the brain was a $\frac{1}{4}$ oz. in the males, and $1\frac{3}{4}$ oz. in the females, below the average weight in the sane. Hence it appears that in general paralysis of long standing, the brain is below the average weight in the sane.

In 1855 the mortality from general paralysis alone was 13 per cent. of that for the year; it included seven males and one female. In three males and one female the spinal cord was softened; there was central softening of the brain also in the female; in two of the males the dura mater was adherent, and in one there was inflammation of the arachnoid and pia mater; in one male there was a large quantity of

* Edinburgh Medical and Surgical Journal, vol. lviii., p. 36.

fluid in the arachnoid on the right cerebral hemisphere and in the spinal canal; in one male a small portion of the spinal cord was disintegrated; in one male the spinal cord was unusually firm; in one male in whom the symptoms of general paralysis were strongly marked, following an injury to the spine, no *post-mortem* examination was made. In one male idiot who had general paralysis the dura mater was adherent, and the lower end of the spinal cord softened; the brain weighed $39\frac{1}{4}$ ounces. In the six males the brain varied in weight from $35\frac{3}{4}$ to 52 ounces, the mean weight being the usual average of 46 ounces; in the female the weight of the brain was $41\frac{3}{4}$ ounces. As before observed, in those cases in which the brain was smallest the disease was of longest standing.

In 1856 the mortality was unusually low, and there were only three deaths in males from general paralysis; being nearly 19 per cent. In 1857 the mortality from general paralysis was 19 per cent., and included seven males and two females.

In 1858 there died five males and one female—nearly 17 per cent. of the mortality—from general paralysis.

In the twelfth report, 1859, a very large proportion—23 per cent.—of the mortality was from general paralysis, including eight males and three females. The spinal marrow was softened in four males and two females, was indurated in five males and three females, and atrophied, with effusion of blood, in one male; there was an unusual quantity of fluid in the spinal canal in four males. The average weight of the spinal marrow in seventeen males was a little over one ounce, and in sixteen females .98, a fraction less than an ounce.

In 1860 there were five fatal cases of general paralysis in males.

From the obituary of 1861 it appears that a very large proportion of the males had general paralysis; thirteen out of twenty-nine who died were affected with that disease. No female died from it. The proportion was nearly 45 per cent. of the mortality in males and 30 per cent. of the whole mortality for that year. There was much blood in the spinal cord, and the central portion was softened in one male. There was about one ounce of fluid in spinal canal, and the cord was softened in one male; in five males the spinal cord was unusually soft, and in three males unusually firm; granular bodies were seen like beads amongst the nerve tubes of softened portion of spinal marrow in one male; exudation

corpuscles were observed by microscope from softened portions of spinal cord in one male; the sheath of the spinal cord was adherent in places, red and rough, and studded in several places with bony spicula in one male.

In 1862 there were six fatal cases of general paralysis in males, and one in females. There was blood in the spinal canal in two males, and softening of the cord in four males and one female.

In 1863 there were ten deaths in males from general paralysis, none in females. Fluid blood was found in the spinal canal in three cases; in one the cord was unusually firm, in the others it was partially softened, as most commonly is the case.

In 1864 there were eight fatal cases of general paralysis in males, and one in females, being $12\frac{1}{4}$ per cent. of the mortality in that year.

In 1865 there were four fatal cases of general paralysis in males and two in females, being 10 per cent. of the mortality in that year.

In 1866 there were the same number of deaths as in the previous year, namely—four males and two females, being nearly 10 per cent. of the mortality, from general paralysis.

In 1867, the mortality from general paralysis was five males and one female. At the commencement of 1868 the seven cases following were under treatment in the County Somerset Asylum.

Case I.—A draper's assistant, aged 33, married; first attack; duration 2 months; was admitted to this asylum May, 1864, in a state of melancholia. The cause unknown. *Previous History.*—Father dead, mother alive; youngest of 10 children; disposition affable, temper cheerful, habits industrious, education good, religion Church of England. *Present State.*—(Physically) general health bad, pulse 66, tongue clean, skin warm, appetite ravenous, bowels costive, sensations dull, expression dejected, dark irides and hair. (Morally) conduct dangerous to others, silent generally, ideas that people wish to poison him, memory indifferent, affections changed, propensities to strip himself. *Additional Particulars.*—Very obstinate, could not be managed at home, mopes about, sleepless. Placed in the infirmary, ordered an aperient; four days afterwards it is reported that he required to be fed once; has since taken food. At the end of two months, in July, there was no improvement; he was confined to bed for a burnt foot contracted in the Turkish bath. In September he was dirty in his habits; he was blistered on nape of neck. In October he had improved, assisted the infirmary nurse. Nov. appeared quite rational,

in good bodily health, anxious to go home. Discharged on probation. December, discharged from the books recovered. Two years afterwards, in December, 1866, re-admitted; second attack, duration 9 months; transferred from another asylum; health indifferent, in a state of melancholia. January 11, in No. 1, idle, takes his food well. Jan. 27, sent to the infirmary, has retention of urine; catheterism, blister ordered to nape. Feb. 10, able to come downstairs; pallid, ordered citrate of iron and ammonia. July 15, has been out playing cricket; medicine suspended. Dec. 24, convulsed, ice applied to the head, which was hot; extremities cold, hot bottles to feet, blister to nape, catheterism required, croton oil given. Dec. 30, able to sit up in No. 4 corridor, he has generally a book before him, unable to take exercise, appetite good. Hair rapidly getting grey. 1868, Feb. 1, had another fit, was comatose for 48 hours, blister to nape, croton oil given. Feb. 9, is able to sit up in the corridor. Feb. 16, very stubborn, unwilling to be dressed or undressed, has not spoken since his attack in December, stares at anyone who speaks to him, pupils dilated, appetite good; dirty, will not go to the closet, staggers in walking, becoming feeble and emaciated. Feb. 18, has a vacant look, more helpless, temperature low, bulb of thermometer in axilla 96 deg.; in mouth between cheek and teeth, lips closed, 97 deg; felt point of a pencil drawn along the soles of his feet. March 6, unable to sit up. March 17, very much convulsed on one side, mouth drawn and head turned towards the right side. Swallows a little fluid with difficulty. 19th, Quite helpless; seems to know persons, but never attempts to speak. Died on March 21. Autopsy, March 23. Weight of body 100 lbs.; length, 5 feet 5 inches. Head, circumference, 22 inches, antero-posterior measurement, $11\frac{1}{2}$ inches; transverse, 11 inches. Opacity of the arachnoid membrane, the lateral ventricles distended with fluid, the brain unusually pale, each cerebral hemisphere weighed 16 ounces, the cerebellum 5, and the medulla oblongata 1 ounce, the encephalon 38 ounces, but when removed from the skull before being cut and the fluid escaped, the encephalon weighed $39\frac{1}{2}$ ounces. There was blood in the spinal canal, the spinal cord appeared enlarged and softened, weight $1\frac{1}{2}$ ounces. Chest: pleuritic adhesions on both sides, pneumonia in first stage in both lungs, the right weighed 31, the left 23 ounces; heart small, $6\frac{1}{2}$ ounces. Abdomen: the intestines natural, stomach 5, liver 46, spleen $3\frac{1}{2}$, right kidney $9\frac{1}{2}$, left 5, renal capsules $\frac{3}{4}$, pancreas 3 ounces. Cause of death, arachnitis, myelitis, double pneumonia.

Case II.—H. C., a tailor, aged 34, single; first attack, duration 11 months, was admitted in July, 1866, suffering from mania and general paralysis. *Previous History.*—Father dead, mother alive, disposition stubborn, temper irritable. Education: can read only; religion: Church of England. *Present State.*—(Physically) general health bad, pulse 54, tongue white, skin cool, appetite good, motion imperfect. (Morally)

conduct dangerous to others, conversation unconnected, ideas wandering, memory bad, propensities to expose his person. *Additional particulars.*—Two months in the workhouse, speech thick, totters in walking. Aug. 3, in the infirmary helpless and irritable, has difficulty in coming downstairs. Aug. 25, is improved and working in the tailors' shop. Five months subsequent to this date the paralysis became more marked, though he was still able to assist in the tailors' shop; gradually getting worse he had to be removed to the infirmary in January, 1867. Has been taking medicine, but seems to have derived no benefit from it up to December, 1867. 1868, Feb. 4. Pulse 56, appetite good, tongue white and tremulous like the lips, speech muffled and indistinct. Unable to feed himself or to walk without assistance, passes his feces and urine involuntarily, sometimes he cries when he wets the floor, is in a state of dementia, destroys his clothing; blisters applied to hollow of the loins. Feb. 10, blistered surfaces have healed, still dirty in his habits, he has another blister applied to nape of neck, and is taking bichloride of mercury, and cod liver oil. Temperature in axilla 94 deg., under tongue 95 deg., is very feeble. Pulse 84 and intermittent. March 2, has had a severe attack of convulsions which left him in a comatose state for 24 hours; was almost pulseless, surface of body and extremities very cold, pupils contracted to a size of small pin's head. Ordered wine, hot bottles to sides and feet, and blister to nape of neck. He rallied. March 9, confined to bed, cannot keep the bed clothes on, but kicks them about; grinds his teeth. Is still taking wine. March 17, fed with fluids, swallows with difficulty. 24th, in a moribund state; died 25th March; autopsy 20 hours after death. Weight of the body 87 lbs., length 5 feet 5 inches. Head: circumference $21\frac{1}{2}$, antero-posterior $12\frac{1}{2}$, and transverse measurement 11 inches. Slight opacity of the arachnoid membrane; the lateral ventricles distended with fluid; roughness, as if fine sand had been sprinkled over the corpora striata, which were unusually dark coloured; the cerebral structure was firmer than natural, each of the cerebral hemispheres weighed $18\frac{1}{4}$, the cerebellum $5\frac{1}{4}$, the medulla and pons 1 ounce, encephalon 44 ounces. The spinal cord was unusually firm, weight $1\frac{1}{4}$ ounce. Chest: pleuritic adhesions; the right lung in second stage of pneumonia, weight 48 ounces, the left lung natural, weight 14 ounces; heart small, $6\frac{1}{2}$ ounces. Abdomen: intestines natural, stomach 5, liver large, $59\frac{1}{2}$, spleen 4, pancreas $2\frac{1}{2}$, right kidney 6, left $5\frac{1}{2}$, renal capsules $\frac{3}{4}$ ounce. Cause of death, chronic cerebro-myelitis and pneumonia right lung.

Case III.—G. G., a shoemaker, aged 40, married, has two sons; second attack, was admitted for the first time in June, 1866, suffering from melancholia caused by destitution. *Previous History.*—Father alive, mother dead, eldest of four children, disposition quiet, temper good, habits industrious. Education: can read only; religion: Church of England. *Present State.*—(Physically) health indifferent,

pulse 96, tongue clean, skin hot, appetite indifferent. (Morally) conduct dangerous to himself and others, conversation threatening, propensities to be indolent and to ramble about at night. He was inclined to be noisy at first, but after a little time he altered in this respect, and was sent out to work. In August he was much improved in body and mind, and was recommended for discharge in September following. He was discharged recovered Oct., 1866. He was readmitted in November, 1867, in a state of melancholia and general paralysis. He walks with difficulty, tremulous voice, reported not dirty in his habits, appetite good, silly laugh, pulse 72, tongue clean, skin cool. Has a large scar in his throat, where he had attempted to cut it. 1868, Jan. 23, in the infirmary, very helpless, cannot go to bed without assistance. Feb. 6, tongue clean and tremulous, pulse 96, appetite good, has to be assisted in walking, getting worse, can feed himself, though his hand is very unsteady, spills fluids, passes his motions involuntarily, speech imperfect, lips tremulous, pupils unequally dilated, right more so than the left, sight gradually failing. Ordered a blister to neck, which did not act. Feb. 18, temperature under tongue 100 deg., in the axilla 95, temperature of room 65, pulse 120, has sensation perfect in the soles of his feet, and when tickled with a feather he felt it at once. Is still in bed in the infirmary, feces and urine passed involuntarily, takes his food well. Is gradually getting worse. Taking bichloride of mercury; he had blistering fluid applied to bottom of loins. Is extremely dirty in his habits; is occasionally very noisy at night, shouting, blaspheming and preventing the other patients from sleeping. March 10, helpless, requires to be fed. April 5, gradually sinking; died April 6. Autopsy 34 hours after death. Head: circumference, $22\frac{1}{2}$, antero-posterior 12, transverse 11 inches. Opacity of the arachnoid, more fluid than natural in the cerebral ventricles; each hemisphere $17\frac{1}{2}$ ounces; cerebellum $5\frac{1}{4}$, medulla and pons 1, encephalon $41\frac{1}{4}$ ounces. Spinal cord soft throughout, $1\frac{1}{4}$ ounce. Thorax: organs natural; right lung 20, left 18, heart 10 ounces. Abdomen: the intestines healthy, stomach 6, liver large, 60, spleen large, $10\frac{1}{4}$, pancreas $2\frac{1}{4}$, right kidney $4\frac{1}{2}$, left $5\frac{1}{4}$, renal capsules $\frac{3}{4}$ ounce.

Case IV.—A. L., a labourer, aged 24, single; first attack, duration 6 months; was admitted March 29, 1867. He was then suffering from mania, due to hereditary predisposition. *Previous History.*—Parents alive, third of nine children, stubborn, temper irritable, habits idle; education, can read and write; religion, Church of England. *Present State.*—(Physically) general health good, pulse quiet, tongue clean, skin cool, appetite good. (Morally) conduct violent to others, conversation connected, memory good, affection changed, propensities to wander. *Additional particulars.*—Has been violent to his father and attempted his life. April 5, is quiet, appetite good, sleeps well. May 31, is out at work and improved. In July his walk was lamer,

and in the following month he had to be sent to the infirmary as he was getting quite helpless. Aug. 21, his spine had been blistered and he required croton oil, the bowels having become confined. His mother visited him, but he did not speak to her. The bowels still continuing obstinate he was ordered some more croton oil. 1868. Feb. 6. Pulse 96, appetite good, tongue clean; is able now to walk and feed himself. Dirty in his habits, his motions pass involuntarily. Spine has been blistered, and he is taking bichloride of mercury. If not prevented, he is in the habit of constantly kneeling on the floor, and his knees have become very sore thereby. Feb. 18. Feels the point of a quill when applied to the soles of his feet. Temperature under tongue, 98; in axilla, 96; in the room, 65 degrees; face flushed. March 28, ordered phosphate of strychnine, and to get up daily. July 12, confined to his bed in the infirmary with severe attack of conjunctivitis. Is improving daily. Mental condition much more hopeful. Oct. 11, Mental condition less encouraging. Bodily health good. 1869, Jan. 1, not improved; in the infirmary. April 5, in No. I; health improved, but shows no mental change. 1870, Jan 27, in good health; mentally no change; employed daily at the Quarry. Feb. 27, now in the infirmary for the last fortnight; has a light attack of rheumatic fever; relieved by alkalies. March 24, examination of chest. By percussion, sounds natural. By auscultation, anteriorly tubular breathing right side. Pulse 100, tremulous. Aug. 12, now in good health. Picks coir. Mentally no change. 1871. Jan. 19, in good health. Childish in manners. Generally picks coir. He seems to have sunk into a state of chronic dementia. With the exception of a hesitation and slowness in speaking, there are now fewer symptoms of general paralysis than formerly. He walks with a slight stoop and shuffle, but his health and appetite are very good. He has been under no special medical treatment recently.

Case V.—Wm. L., a pensioner, aged 56, married, has one son; first attack, duration two weeks, was admitted July 15th, 1867, suffering from mania and general paralysis. *Previous History.*—Parents dead, disposition stubborn, temper violent, habits dirty; religion, Church of England. *Present state.*—(Physically) general health indifferent, pulse feeble, tongue white, skin cool, appetite good; sensations, blind and deaf, motion perfect, expression dull. (Morally) conduct violent to others, conversation obscene, ideas exalted, affections altered, propensities to swear. *Additional particulars.*—Has been blind for some years; noisy at night. July 19. Cannot walk without assistance; ordered a Turkish bath and was afterwards sent to the infirmary; is gradually become more helpless, and he is reported as being in Nov. confined to bed in the infirmary with well marked symptoms of paralysis. Dec. 28. Is very feeble and gradually getting worse, obstinate and abusive when requested to do anything. Feb. 8, 1868. Still in bed, in much the same state, temperature of

room 65 deg.; would not allow the thermometer to be placed in his mouth or axilla, and became excited and violent when an attempt was made to do so. March 10. Still bedridden, passes his feces and urine involuntarily and unconsciously. Is able to feed himself, takes his food heartily; had his neck blistered, and is taking bichloride of mercury.—From Case Book:—Oct. 11, confined to bed, quite helpless; requires to be fed; can only swallow fluids; deglutition imperfect. Nov. 1, seized by a fit of convulsions; sank rapidly and died the same day. Autopsy 19 hours after death. Weight of body 98lbs.; length 5 feet 7 inches. Head: circumference, $22\frac{1}{2}$, antero-posterior $12\frac{1}{2}$, transverse 12 inches. A sanious fluid in arachnoid sac; dura mater of a yellowish tinge, and coated by a pulpy substance. Brain very much congested with blood, and softened in the deeper part of the anterior lobes. Each hemisphere weighed 19 ounces, cerebellum 5, medulla and pons $1\frac{1}{2}$ ounce. Spinal cord softened throughout, softening more distinct in some places than in others, $1\frac{1}{4}$ oz. (sent to Dr. Clarke). Chest: both lungs in the first stage of pneumonia, right 31, left 25 ounces; heart 9 ounces: a deposit of fibrine in walls of aorta and about the base of the semilunar valves. Abdomen: liver 41, nutmeggy, stomach $5\frac{3}{4}$, pancreas $2\frac{1}{2}$, spleen $2\frac{1}{2}$, right kidney $4\frac{1}{2}$, left $4\frac{1}{4}$, capsules, $\frac{3}{4}$; intestines thin. Cause of death, cerebritis, myelitis, double pneumonia.

Case VI.—S. B., a stableman, aged 46, married, first attack, duration five months; admitted Jan., 1868, in a state of general paralysis and dementia, caused by a bullet rebounding from a target and striking him on the head when employed as a marker at a rifle range. *Previous History.*—Parents alive, only child, disposition quiet, temper good, habits intemperate; education, can neither read nor write. *Present state.*—(Physically) general health bad, pulse 90, tongue clean, skin cool, appetite good, sensations dull, motion imperfect, staggers about, expression silly, hazel irides, black hair, sallow complexion. (Morally) conduct violent to others, conversation about his wealth incoherent, ideas that he is rich, memory lost, affections not changed, propensities to destroy clothing, &c. *Additional particulars.*—Staggers in walking. Feb. 3. Very noisy and violent, had to be placed in the strong room. Feb. 6. Pulse 108, appetite good, bowels regular, utterance thick and indistinct, speaks as if he had a plum in his mouth, walks with his legs wide apart, does not stagger, not dirty, has control over sphincters. Feb. 18. Seems to have more difficulty in walking, is very obstinate; it was quite impossible to take the temperature of axilla and mouth, as he struggled directly the attempt was made, and almost broke the thermometer; pulse 96, no sensation in the soles of the feet. March 11. Staggers in walking, is unable to lift a cup of water to his mouth without spilling it; quite unable to protrude his tongue, is becoming emaciated, wets the bed occasionally, appetite still good, lisps a little when he speaks, speech almost unin-

telligible, due perhaps to loss of control over the tongue, cannot keep his eyes closed very long, pulse 84. March 20, gradually sinking, helpless, confined to bed, no power over sphincters. Died 24th March. Autopsy 30 hours after death. Weight of body 100 lbs., length 5 feet 7 inches. Head: circumference $21\frac{1}{2}$, antero posterior 12, transverse measurement $10\frac{1}{2}$ inches; opacity of the arachnoid membrane, there was an unusually large quantity of fluid in the lateral ventricles and central softening of the brain; each cerebral hemisphere weighed 19, cerebellum $4\frac{3}{4}$, medulla and pons $\frac{3}{4}$ ounce; encephalon 44 ounces. The spinal cord was unusually firm, weighing $1\frac{1}{4}$ ounce. Chest: pleuritic adhesions on the right side only; there was recent lymph on the under surface of the right lung, which was in the first stage of pneumonia, $39\frac{3}{4}$, left 12 ounces, natural; heart $8\frac{1}{2}$ ounces. Abdomen: recent lymph on descending colon; stomach 5, liver 54, spleen 3, pancreas $2\frac{3}{4}$, each kidney $5\frac{1}{2}$, renal capsules 1 ounce. Cause of death, central softening of brain, chronic myelitis, and pleuro-pneumonia of right lung, colitis.

Case VII.—W. B., an artist, aged 54, married; admitted in May, 1863; he had been ill one month; two years previous he was in Paris, and under treatment for one month at Charenton; form of disorder on admission, general paralysis combined with mania; bodily health bad, appetite good, expression silly, conduct violent to others, conversation incoherent, ideas exalted, memory bad, affections lost, propensities destructive; he was suffering from diarrhoea, hæmorrhoids, and stricture of the urethra, for which he was at once placed under medical treatment. On the 4th June reported as still in a very feeble state, mischievous and quarrelsome, had picked sores on his face and hand, dirty in his habits; ordered bichloride of mercury and iodide of potassium, which he continued to take until December, a period of six months, his bodily health improving. February, 1865. His mental state not improved, very dirty in his habits, and indolent. In May, reported as more tranquil. In October, very feeble, and ordered stimulants; in the infirmary. January, 1864. Health better, removed from infirmary; quiet, still very slovenly, ideas exalted, employs himself in drawing. January, 1866. Health good, no mental improvement. In October reported as cheerful, reads and writes a good deal. January, 1867. In good bodily health, habits slovenly, cannot be induced to wear stockings, and prefers lying on the floor to his bed. In April painting portraits, very quiet and cheerful, dirty habits not improved, writes letters to great people, his ideas still exalted. February, 1868. Health good, no improvement in his mental condition or slovenly habits. In this case the paralytic symptoms have gradually disappeared, leaving the mental disorder less acute, but still deranged, the ideas continue exalted, he is in the habit of writing to Government Ministers and officials in a grandiloquent style. Other cases, as Nos. I., III., and IV., have been benefited for a time by similar

treatment, long continued use of alterative doses of mercury and iodide of potassium. From Case Book:—Oct. 29, health declining, of dirty habits, ptosis of right eyelid, does not paint. Dec. 28, in a very feeble state in the infirmary, has a bed sore, refuses wine and medicine. 1869, Jan. 1, gradually sinking, still conscious. Jan. 9, had an attack of convulsions, in which he died. His body was removed for burial by his relatives; no *post mortem* examination was allowed. Cause of death, general paralysis.

The report of Cases IV., V., and VII., since 1st July, 1868, are from the Case Books, for which I am indebted to Mr. Power, the Assistant Superintendent of the County Somerset Asylum.

General Paralysis, or an incomplete and peculiar form of palsy, not mentioned by the older writers, was minutely observed by the French physicians, Boyle, Calmeil, Delaye, &c. It was first noticed by Esquirol in 1805, as a frequent and fatal complication in insanity. It is described as consisting of a general and gradual loss of power in the voluntary muscles, a tremulous motion of the tongue and lips, first observed with indistinct articulation or a faltering in the speech, and a difficulty often in pronouncing the letter R. When protruded the tongue does not incline to one side. A similar embarrassment is observed in the gait, and lastly, in all the muscular system.

The patient walks stiffly, deviates to one side, stumbles going over a step; still, he perseveres and takes pleasure in walking about; is restless and desires change. In attempting to run, his course is like a drunken person; he stumbles, and frequently falls. A state of morbid tension exists in all the muscles, he comes awkwardly down on the soles of his feet, the arms and hands now become stiff, his arms are extended, objects are grasped convulsively and sometimes suddenly let fall, the eyelids are widely open, the jaws firmly closed, sensibility becomes blunted. The paralysis is often more marked on one side of the body than the other. At first it is partial, it then invades a greater number of muscles and becomes general. Its progress is regular, it goes on constantly increasing, language is replaced by confused sounds, while the understanding grows weak, a melancholy stage usually exists, and Prichard states that whatever character the disorder of the mind may have presented, it soon passes into a state of chronic dementia. The special senses generally remain to the last. The cutaneous sensibility is usually blunted, but it occurs in transitory states that the slightest touch excites extended

reflex movements, occasionally preceding convulsions; after each attack there is an increase of the paralysis, and of the mental dullness. Digestion is disordered and constipation is usually a most persistent symptom.

Three distinct stages have been recognised by writers. In the first there is rigidity of action; the movements, although uncertain, retain a certain vigour. In the second stage there is a relaxation, or a state of resolution always increasing, of the muscular structure. The patient at last lies prostrate; the parts pressed upon become excoriated and ultimately gangrenous. The excretions are involuntary, convulsions and coma supervene, which continue for many hours, and are frequently repeated for several successive days. After these seizures the malady usually proceeds rapidly to its fatal termination.

The first symptoms are usually psychical; in the majority of these cases the paralysis succeeds the intellectual disorder. The motory disturbances occur in individuals already mentally deranged, and appear years or months after the psychical symptoms. Perversions of the character are sometimes observed and violations of property, from the idea that the objects belong to them or from an irresistible desire to gratify an impulse. The first symptoms are generally accompanied with vague delirium of mania; some have very extravagant ideas. In the later periods these ideas disappear. The weakness of the mental faculties become more profound as the paralysis becomes more marked. In the advanced period they become emaciated and require to be fed: at first they are greedy, and the nutrition is well maintained. At the last gangrenous spots appear on the skin, abscesses form, hectic fever and pyæmia occur in some; others have diarrhœa, pneumonia, bronchitis, or pulmonary phthisis, as the fatal terminations. In a few the paralysis precedes the mental derangement. Baillarger goes so far as to declare that the paralysis is the primary and leading symptom of the disease, and the insanity secondary and accessory. It should, however, be kept in mind that a general paralysis similar in all respects to that now described, occurs sometimes without being followed by insanity, as has been observed by Delaye and Foville, who saw induration of the spinal cord with effusion of serum in two cases of general paralysis unattended by insanity. Three cases have occurred within my own knowledge recently. One was the case of an officer retired from the army, after 35 years' service, who for several years pursued country sports, riding,

shooting, fishing; at length, when about 70, he was attacked with what was termed creeping palsy, ushered in by faintings; he was for some months confined to bed, pulse feeble; he got bed sores and gangrene; he very slowly and gradually sank; his intellect remained clear to the last. The disease in his case followed an upset from a conveyance. The other two cases occurred in men of tall stature, one a member of the clerical the other of the legal profession: the paralytic symptoms lasted for about three years, kept gradually increasing until they became bedridden, were unable to articulate, feed themselves, or answer the calls of nature. Although physically so feeble, there was no mental derangement in either case.

A case of general paralysis without mental disorder, remarkable for the want of power to raise the foot over the slightest obstruction, and which continued for fifteen years, was that of a gentleman engaged in an arduous profession. Until the last three years before his death he was under the care of a practitioner, who prescribed a generous diet, tonics, ammonia and "*Liquor secale cornuti*" in doses of ten drops three times a day, from which the general system derived benefit.

Railway accidents, causing concussion to the spine, are likely to be followed by general paralysis.

In cases of *general paralysis* some obvious disease of the cerebro-spinal organs is invariably found to exist. It is supposed to be more frequent in Paris than elsewhere, because it has been more accurately observed there. The proportion is 1 to 4, according to Boyle; Baillarger states it to be at Bicetre and Salpetriere 1 in 16. In Vienna 12 and at Florence 18 per cent. of the admissions have this complication (vid. Griesinger on Mental Diseases, p. 401). Dr. Burrows has stated it to be a comparatively rare disease in England.

Out of 924 deaths in the County Somerset Asylum, 162, or nearly 18 per cent., have had this disease, and the proportion of males to females was just 4 to 1. The youngest male was 26 and the oldest 75; the age at which it was most frequent was 37 to 47; in the decennial period from 30 to 40 there were 40, from 40 to 50 there were 53, from 50 to 60 there were 23, from 60 upwards only six cases. The married greatly exceeded the single.

A tedious and fatal disease—progressive palsy of the tongue, velum palati, and lips—glosso-pharyngeal palsy, has also been observed by French writers, no co-existent derangement being

perceptible in the sensory nerves nor in those of special sense. The attendant *post-mortem* lesion is an intense fatty atrophy of the palsied nerves, especially the hypoglossal nerve. In some cases a diffuse sclerosis of the medulla oblongata has also been found.* Wachsmuth believes that the seat of the disease is in the olivary bodies and in the grey matter which forms the floor of the fourth ventricle. The atrophy of the nerves is secondary. The *post-mortem* lesion in this disease, so analogous to what I have found in many cases of general paralysis of the insane, as well as the following symptoms, so like the early symptoms of general paralysis, show a close relationship between the two.

In glosso-pharyngeal palsy at the outset the patient makes no complaint. He cannot pucker up his mouth, and hence cannot blow, whistle, or spit. The saliva runs from his mouth. The expression of the countenance becomes blank and strange. As the muscles of the lips cannot take part in the play of the expression, pronunciation of the labial letters is difficult and gradually becomes impossible. If the malady extends to the tongue, not only does articulation become still more embarrassed, but the acts of chewing and swallowing become impeded, and afterwards, when the tongue has become still more helpless—lying quite motionless in the mouth—these are no longer practicable. Palsy of the palate shows itself from the nasal tone of the voice, and, so long as the pharyngeal muscles remain sound, by the regurgitation through the nose and mouth of food and liquid which enter the pharynx. If the pharynx also become palsied, the patient, when offered drink, rejects a large portion of the liquid with violent expiratory motions, so that at last it often becomes necessary to feed him by means of the œsophagus tube.

In the 20 years, from the opening of the Somerset County Asylum, the 1st of March, 1848, to the 29th February, 1868, inclusive, the cases of general paralysis amounted to $8\frac{1}{2}$ per cent. in the males and 2 per cent. in the females, on the total admissions for that period. The proportion of males to females was as 4 to 1; there were 7 males still under treatment; *post-mortem* examinations have been made in 155; of these, 124 were males, and 31 females. An analysis of these examinations in males and females respectively, have been tabulated according to age,

* Niemeyer's Practical Medicine, Eng. Trans., vol ii., p. 337.

in decennial periods, showing the date of death, duration, No. of Case, symptoms on admission, cause, summary of treatment, assigned cause of death, *post-mortem* appearances, including five measurements of skull, state of cerebral membranes of each cerebral hemisphere, of cerebellum, of medulla oblongata, and weight of each; condition and weight of spinal cord. Condition and weight of thoracic organs, lungs, and heart. State and weight of the abdominal organs. Weight and length of the body. These tables have been submitted to the printer, who found that they could not be put in a convenient form for the pages of this Journal, and so they have been omitted. If time had permitted some of the earlier cases in the tables, which are of interest, and are pretty fully recorded, might have been added to this paper. The summary of the results are, shortly, as follows:—Under 30 years, 4 cases, the youngest 26, one single and three married; average duration of illness 15 months. The form of the disorder in 2 was mania, in both the ideas were exalted; dementia in 2, and the ideas obscured or lost. Cause assigned—intemperance in 1, cerebral disease in 2, and spinal in 1. Treatment: counter irritants, blisters, moxa and seton in three, bichloride of mercury in two, strychnine in one, cod liver oil for restoration of general health in one. Cause of death, softening of brain and spinal cord, and pulmonary tubercles in 1, fluid in spinal cord in 2, with pneumonia in 1 and pleuro-pneumonia in the other, fluid in the cerebral ventricles, bronchitis and dysentery in 1.

Head: circumference $21\frac{3}{4}$, antero-posterior from root of nose to occipital protuberance 13, and transverse from one external auditory foramen over vertex to the other $13\frac{1}{4}$ ins. Cerebrum: opacity of arachnoid membrane in two and 8 ozs. of fluid in one. There was congestion of cerebral vessels in one, softening in cerebrum in one, excess of fluid in ventricles in one; brain appeared natural in one; the average weight of right hemisphere $18\cdot4$; in one case it was $4\frac{1}{2}$ ounces lighter than left; average weight of left hemisphere $19\cdot4$; cerebellum large in one case; average weight of encephalon $46\cdot6$ ounces. There was an unusual quantity of fluid in the spinal canal in two cases; in 1 there was congestion of blood, and in 1 softening of the spinal cord, average weight of which was $1\frac{1}{4}$ ounce. There was congestion of blood in right lung in 2, bronchitis in 1, and pleuro-pneumonia in 1, average weight $33\cdot5$; pleuro-pneumonia of left lung in 2, bronchitis in 1, and tubercles in 1, average weight $26\frac{1}{2}$ ounces; heart natural, average weight

10 ounces. Intestines ulcerated in 2; mucous membrane of stomach discoloured by taking infusion of logwood in 1, average weight 6 ounces; liver congested in 1, weight 58; spleen 6·4, pancreas 3·2, right kidney 4·5, left kidney 5, renal capsules ·9, weight of the body 107lbs., length 5 feet 6¼ inches.

From 30 to 40 years there were 40 cases, of these 10 were single, 31 married, and one widowed; only 12 were remarkable for extravagant ideas; in the great majority the ideas were wandering, the mind was quite lost; in one there was great despondency, one case was combined with idiocy, one with melancholia, 17 with dementia, and three with mania. The causes were from disease of the nervous centres in 22, from injuries or blows on the head in 5, from intemperance in 5, after fever in 5, hereditary and other causes in 5. The treatment varied according to the symptoms, and was generally the same as that stated in the previous cases. The assigned cause of death was from disease of brain and membranes in all the cases, with disease of spinal cord or membranes in 32, there was cerebral apoplexy in 1, and spinal apoplexy in 2; the cerebral was combined with pulmonary disease in 15, bronchitis in 1, pleurisy in 3, pneumonia in 8, and phthisis in 3, diarrhoea in 1.

Head: the skull was unusually dense and thick in 2; the circumference of the head varied from 21 to 23 inches, the average 22·1; the antero-posterior measurement varied from 11 to 14½ inches, the average 12·8; the transverse measurement varied from 10½ to 14, the average 12·6 inches. The cerebral membranes were natural in 10 cases, the dura mater was preternaturally adherent in 8; a quantity of fluid beneath it in 1, the arachnoid thickened and opaque in 12, fluid on sac of arachnoid in 6, mixed with pus in 1, congestion of blood in the veins in pia mater in 7. The structure of cerebral hemispheres unusually congested in 3, the grey matter unusually dark in 1, and the white matter in 1, fluid in the ventricles in preternatural quantity in 20, structure soft in 3, cerebral structure remarkably tough and firm in 6, roughness or deposits in 4th ventricle in 2, inequalities in size and weight of cerebral hemispheres in 9 cases from 1 to 3¼ ounces; the variation has been in favour of the right hemisphere in a majority of 3 cases, the right cerebral hemisphere varied in weight from 15½ to 24¼, the average weight 19·2 ounces; the left cerebral hemisphere varied from 14½ to 24¼, the average weight 19 ounces. The cerebellum was unusually

firm in 2, above the usual size in 6 cases, the weight varied from $4\frac{1}{4}$ to $6\frac{1}{4}$, the average weight 5.1 ounces. The medulla oblongata and "pons varolii" varied in weight from $\frac{3}{4}$ to $1\frac{3}{4}$, the average weight 1.6 ounce. The encephalon varied in weight from $35\frac{1}{4}$ to $55\frac{1}{2}$, the average weight 45 ounces. The spinal cord varied in weight from 1 to $1\frac{3}{4}$, the average weight 1.2; there was blood effused in spinal canal in 5, congestion of blood in vessels of cord in 2, fluid in canal 6, there was more or less softening in the cord in 14, the cord was unusually firm and white in 4, corpuscles were found by microscopical examination in 2, white specks on spinal arachnoid in 1.

Chest: the right lung was healthy in 8, there was congestion of blood in 6, bronchitis in 4, pleuritis in 5, pneumonia in 8, pleuro pneumonia in 6, tubercles in 3, it varied in weight from 11 to 52, average weight 26.5 ounces. The left lung was natural in 13, congested with blood in 4, there was emphysema and bronchitis in 2, pleuritis in 4, with effusion in 1, pneumonia in 9, pleuro pneumonia in 5, and tubercles in the lung in 4, it varied in weight from $9\frac{3}{4}$ to 66, the average weight 23.3 ounces. The heart was enlarged in 5, below average size in 5, fatty in 1, flabby in 1, valves thickened in 1, it varied in weight from $7\frac{1}{2}$ to $16\frac{1}{2}$, the average weight 10 ounces.

The intestines were for the most part in a healthy state; tubercles in the mesentery in 1, redness or inflammation of colon and ileum in 6, tapeworm in one, fatty omentum in 1. There was melanosis of stomach in 2 cases, it was enlarged in 7 cases, it varied in weight from 4 to $9\frac{1}{4}$; average weight 5 ounces. The liver was congested and enlarged in 6 and atrophied in 3, it varied in weight from 36 to 72, the average weight 53.1 ounces. The spleen was soft in 2, enlarged in 6, below the average in 10, it varied in weight from $2\frac{1}{2}$ to 11, the average 4.8 ounces. The pancreas varied in weight from 2 to 4 ounces, the average weight 3.1 ozs. The kidneys were united, forming "horse-shoe kidney," which weighed 6 ounces in one case; each kidney had an abscess containing blood and pus and double the usual weight, being above 10 ounces in 1 case; the right kidney was enlarged in 1, and the left in 8 cases, the right varied in weight from 3 to $10\frac{1}{4}$, and the left from $3\frac{1}{2}$ to $10\frac{1}{2}$ ounces; the average weight of the right was 5.2, and the left 5.3 ounces. The renal capsules varied from $\frac{3}{4}$ to 1 ounce; in one instance there was softening, the average weight .8 ounce.

The body was emaciated in 10, it varied in weight from 71 to 154 lbs., the average weight was $107\frac{3}{4}$ lbs.; the length of the body varied from 5 to 6 feet, the average length was 5 ft. 7.3 inches.

In the decennial period, from 40 to 50, there were 51 cases—8 single, 40 married, and 3 unknown; the ideas were exalted in 9, wandering in 22, religious in 4, suicidal in 1, acquisitive in 1; the others appeared to be quite lost as far as regards the state of the mind; the duration of the disease averaged $20\frac{1}{4}$ months in 50 cases; the form of the disorder was dementia in 24, mania in 17, melancholia in 8, and in 2 epilepsy was combined with the general paralysis. The causes were apparently from disease of the nervous centres: cerebro-spinal in 21, from intemperance in 11, from fright, grief, religious excitement, and other emotionary causes in 19. As regards treatment, blisters were used in 24, the bichloride of mercury in 15, strychnine in 2, cupping or venesection in 5, and tartar emetic in two cases, anodynes and hypodermic injection in 5. The cause of death was from cerebro-spinal disease, including that of the membranes in all the cases, combined with pulmonary disease in 26, cardiac in 1, with disease of the intestines in 2, of the kidneys in 3, and with erysipelas in 3.

The circumference of the head varied from 21 to 24 inches, the average being 22.4; the antero-posterior varied from $10\frac{1}{2}$ to $14\frac{1}{2}$, the average being $12\frac{1}{2}$ inches: the transverse varied from $10\frac{1}{2}$ to $14\frac{1}{2}$, the average being 12.2 inches. The average weight of each cerebral hemisphere was 19.2, of the cerebellum 5.2, and of the medulla and pons 1; the average weight of the encephalon 45.6 ounces. The dura mater was preternaturally adherent in 10; there was pus in the arachnoid sac and bloody serum over left cerebral hemisphere in 1, fluid in the arachnoid in 4, opacity and thickening of arachnoid in 17, congestion of cerebral vessels in pia mater in 2, bony deposit in falx in 1. The cerebral vessels were congested in 4, more fluid than natural in the cerebral ventricles in 12, the structure was unusually pale and firm in 4 and soft in 2, the grey matter unusually dark in 2; the brain was above the average weight in 15, and below it in 12. There was fetid pus in the spinal arachnoid in 1, the arachnoid was thickened or adherent in 6, fluid in the spinal canal in 4, and blood in 3, there was congestion of the spinal cord in 1; it was softer than natural in 21 and firmer than natural in 7;

the weight of the cord varied from $\frac{3}{4}$ to $1\frac{1}{2}$, the average weight being 1.1 ounce.

Chest: pleuritic adhesions of right lung in 4, of left in 2; congestion of blood in right lung in 8, in left lung in 8, œdema of right in 2, of left 3; pleuritis of right in 2, of left in 2; pneumonia of right lung in 16, of left in 12; tubercles in right in 2, in left in 3; the lungs were natural in 9 cases of right and 15 of left lung. The right lung varied in weight from 11 to $58\frac{1}{2}$, and the left from $10\frac{1}{2}$ to 47 ounces, the average weight of the right 28.3, and of the left 24.5 ounces. The heart was enlarged in 15, and smaller than usual in 13; it varied in weight from $7\frac{1}{2}$ to $14\frac{1}{2}$ ounces, the average weight being 11.1 ounces. Abdomen: there were peritoneal adhesions in 2, redness of intestinal mucous membrane in 4; it was natural in the remainder. The stomach varied in weight from $4\frac{1}{2}$ to 8, the average was 6.2 ounces. The liver varied in weight from 40 to 72, the average weight 58.9 ounces. The spleen varied from $2\frac{1}{2}$ to 11, average 5.4 ounces. The average weight of the pancreas 3.5 ounces. The right kidney was diseased in 3 and the left in 6, in one from a large abscess; it varied in weight from $3\frac{1}{2}$ to 7, and the left from $3\frac{1}{2}$ to 8, the average weight of the right being 5.1, and of the left 6.1 ounces. The body varied in weight from 61 to 157 lbs., the average weight 119 lbs.; the length varied from 5 to 5 feet 11 inches, average length 5 feet $7\frac{1}{4}$ inches.

In the decennial period from 50 to 60 there were 23 cases. It is hardly necessary to go over the particulars, as it would be little more than a recapitulation of the foregoing; the brain was somewhat smaller, the average weight of right cerebral hemisphere was 18.2, of the left 18.5, and of the encephalon 45 ounces; the body 115.8 lbs. At the decennial period 60 to 70 there were only 5 cases. One case reached the age of 75 years.

There were, during the same period of 20 years, 31 deaths from general paralysis in females; 2 were under 30 years of age, 11 from 30 to 40 years, 11 from 40 to 50 years, 4 from 50 to 60 years, and 3 from 60 to 70 years; the youngest was 29, the oldest 68 years of age.

The ideas were exalted in 2, desponding in 3, silly in 1, wandering in 13, suicidal in 3, taciturn in 1, lost in 8. The average duration of illness was 38 months. The form of the mental disorder was mania in 10, melancholia in 7, dementia in 13, and epilepsy in 1. The causes, as far as ascertained,

were from disease of the nervous centres, chiefly or primarily affecting the cerebrum, judging from the degree and duration of the aberration of mind, in 7; spinal in 2, judging from the duration of the paralysis of speech and voluntary motion in walking; cerebro spinal in 8, where a distinction between the intensity of the cerebral and spinal symptoms could not be made; emotional, as from domestic grief, religious despondency in 5, from intemperance in 3, from hereditary predisposition in 1; injury to head in 2, no cause assigned in 3. The treatment was general, for the improvement of the bodily health in 7; for the specific disease in 17, by blisters to spine, seton in nape, the solution of the bichloride of mercury, by stimulants in a few cases, and in one by opiates. The assigned cause of death was difficult to ascribe to any organ exclusively; the brain or investing membranes were diseased in 24, the spinal cord or membranes in 25; the lungs in 10, the intestines in 2, and the kidneys in 1.

The skull was unusually thick in 4; and the diploe injected with blood in 1; the average circumference was 21·8, the antero posterior 12·5, and the average transverse measurement 12 inches. There were preternatural adhesions of the dura mater, or opacity and thickening of the arachnoid, fluid in the sac and congestion of blood in vessels in pia mater in 14. There was fluid in the cerebral ventricles in unusually large quantity in 12; there was roughness on the lining membrane on "corpora striata" observed in 2, there was cerebral softening in 3, with an offensive odour in one of them; the cerebrum was unusually firm in 3, congestion of blood in 2, clot of blood in right lateral ventricle in 1, a tumour size of a pigeon's egg in right hemisphere in 1, the cerebral hemispheres natural in 1, atheroma of arteries in 1. In 11 cases, from 30 to 40 years of age, the average weight of the right cerebral hemisphere was 17·5, and of the left 17·5, the average weight of the encephalon 40·9 ounces. In 11 cases, from 40 to 50 years of age, the average weight of the right cerebral hemisphere was 17·7, the left 17·6, the average weight of the cerebellum 4·9, and the medulla 1; at both periods the average weight of the encephalon 40·7 ounces; at the last period, from 40 to 50 years, the spinal arachnoid was adherent in 2, pus in spinal canal in 1, fluid in spinal canal in 4, *cartilaginous* specks on spinal arachnoid in 1, blood in canal in 1; there was congestion of blood in the spinal cord in 1, softening to a greater or lesser extent in 13, the cord was unusually firm in 2, the average weight of spinal cord 1·3 ounce.

Chest: The right lung in a healthy state in 10, the left in 8; there were pleuritic adhesions in 4, emphysema and bronchitis in 5, congestion of blood in lungs in 5, pneumonia in 3, pulmonary tubercles in 1, the average weight of the heart was 8·6 ounces.

Abdomen: There were peritoneal adhesions in 2, more or less redness and inflammation of mucous membrane of intestines in 3; the average weight of the stomach was 5·4 oz., of the liver 42·7, of the spleen 4, of the pancreas 3, of the right kidney 4·2, of the left kidney 4·3, of the renal capsules; the average weight of the body was 91·5 lbs., and the length 5 feet 3 inches.

The cause of death is frequently obscure, and without a *post-mortem* examination cannot be certified with accuracy; if it be done carefully, as a matter of course, no objection is ever made. In every public asylum, hospital, and infirmary, as in naval and military hospitals, a *post-mortem* examination should be imperative, as it is the only way in which the diagnosis of the disease can be established or corrected, and it is by such means our knowledge of disease is to be extended. The public, equally with the medical profession, are interested. All workhouse infirmaries, for instance, should be conducted in such a way as to be made useful as places of medical education for the study of disease and morbid appearances. This would no doubt be the case if workhouse infirmaries were not under the sole control of elected Boards of Guardians, who have power to close them against pupils. The medical profession has thus been forced to provide for the instruction of their pupils other and less adequate means than those which workhouse infirmaries so abundantly afford, by the establishment of hospitals, which only partially provide for the wants of the poor, for the most part being confined to a few medical and surgical wards for adults. Children are not received, nor aged or insane persons, so that the pupils have not the advantage of witnessing the treatment of such cases, which form so large and important a share of their attention when in practice. This want, workhouse infirmaries would amply supply. The mortality from disease in hospitals and infirmaries is found to be much higher than where people are attended at their own homes. Instead of building hospitals the proper and most beneficial succour to the working classes would be to improve their dwellings.

The Physiology of Mind in the Lower Animals. By W. LAUDER LINDSAY, M.D., F.R.S.E., Physician to the Murray Royal Institution [for the Insane], Perth.

"In *all* departments of investigation, it is right to *commence* with the study of that which is most common, *simple*, and regular: and thence to proceed to inquiries respecting that which is unusual and irregular."

*Bucknill and Tuke.**

"It is a step in advance in *every* science to *simplify* questions, by introducing into the study of the most complicated facts the knowledge derived from an order of facts simpler in their character and better understood. It is thus that Mathematics have rendered the greatest possible service to Physics, Physics to Chemistry, and these two sciences to Physiology."

Claude Bernard.†

"In *all* sciences the *errors* precede the truths; and it is better they should go first than last."

Horace Walpole.

I. *Introduction.*

It has come to be a recognised axiom in science that the study of the *simple* should precede that of the complex: that a knowledge of what is easy, should be the basis of an investigation of what is difficult of comprehension. It has also come to be fully admitted in medicine that a thorough acquaintance with form, structure, function, even disease, in the *Lower Animals*, is of the utmost importance in the study of the morphology, anatomy, histology, physiology, and pathology,‡ of *Man*. There can now be no doubt of the important light that has been shed on zoological science by the study of the simple cell and its gradual development into complex tissues; of the ovum and its evolution into the different forms of animal life; of the skeleton in the lower animals as compared with man. So far from *human* anatomy, histology, physiology, or pathology, occupying the exclusive attention of the most advanced students in medicine, these

* * "Manual of Psychological Medicine," 1858.

† "Lectures on Comparative Pathology:" "Medical Times," Jany. 7, 1860, p. 5.

‡ I fully illustrated this proposition, so far as regards *Pathology*, in a paper published in 1858—"On the Transmission of Disease between Man and the Lower Animals,"—in the "Edinburgh Veterinary Review and Annals of Comparative Pathology."

important departments of biological knowledge now constitute mere sections of the grand sciences of *comparative anatomy*, *histology*, *physiology*, and *pathology*, which relate to the knowledge of structure, form, function, and disease in the whole animal kingdom; and point out, on the one hand, the bearings of our acquirements in human medicine on veterinary science, and, on the other, the relations of the *Natural History of the Lower Animals*—in disease as well as in health—to human medicine and our knowledge of Man. There is, moreover, an important department of comparative physiology and pathology which is *experimental*: which has already yielded results* of the highest interest to the physician; and which promises to yield results* of still greater value in proportion as experimental physiology and pathology are cultivated in this country.

Comparative Psychology, however—the Science of Mind in all classes of Animals, including Man, and in the lower animals specially as contrasted with Man—is almost entirely unknown and unstudied in this country. And yet there is no department of the wide and perplexing domain of psychology that offers to the student so much that is at once novel and important as the study of *Mind in the Lower Animals*, both in its normal and abnormal states—its conditions of health and disease—its physiology and pathology. It is from *this* direction, it appears to me, that we must look for material additions to, or improvements of, our knowledge of the phenomena of healthy and diseased mental action in Man. Moreover, I can see no reason why the principle of *experiment* should not be applied to the investigation of the phenomena of Mind in the lower animals, just as it is applied to the study of other functions or phenomena. Experimental investigation on the lower animals has already been productive of contributions* of the highest value to our knowledge of diseased or disordered function in Man; and I have no reason to believe that the function of the brain—mentalization or cerebration—forms an exception to the general rule. At all events, I venture to recommend the subject to the most earnest consideration of students in physiology and pathology, having the strongest conviction that the results of *experimental investigation of the phenomena of Mind in the Lower*

* They are referred to in the author's Papers entitled—

(a) "Experiments on the Communicability of Cholera to the Lower Animals:" "Edin. Medical and Surgical Journal," 1854.
 (b) "Choleraization:" "Lancet," vol. ii. for 1866, p. 600.

Animals—and especially in those of the domestic animals, which most closely resemble man in structure and habits—cannot fail to yield fruits of the most important kind alike to veterinary and medical science.

Hitherto physicians and metaphysicians, philosophers and writers of all kinds, in studying Mind—if, indeed, many of them have really *studied* it at all, and have not simply given the rein to their prejudices, availing themselves of such second hand information as suited their respective theories or fancies—have confined themselves to its phenomena as exhibited in *man*. They have devoted themselves to an analysis of the *most complex form of mind*; and have not brought to bear on so intricate a study the important knowledge that might have been derived from an investigation of its simplest phases in the lower animals. Among other results of so restricted a study or knowledge, are the belief at the present day by many highly educated men, that the lower animals do not possess mind at all; all their mental phenomena being attributed to the operations of the convenient faculty termed *instinct*. The inter-relations of instinct and reason are thoroughly misunderstood; arbitrary and mischievous distinctions are maintained between man and his fellow animals, some of whom* are, nevertheless, in certain respects, infinitely *his* superiors; and the utmost diversity of opinion exists, even among the most accomplished psychologists, as to the constitution of mind, no two authors agreeing in regard to the number, names, or characters, of its fundamental “faculties.” In order to the substitution of a better state of matters, we must, I believe, first become ashamed alike of our ignorance and prejudice; unlearn much that we have already learned in human psychology; and begin our studies on mind with its genesis or rudiments in the simplest forms of animals, tracing its gradual progress from simplicity to complexity. Among other errors of which we must rid ourselves, we must be prepared, *ab initio*, in our studies, to cast aside the erroneous assumption that “intellectual power depends altogether on

* It seems to me not only legitimate, but proper, to use what are called “personal” pronouns, in speaking of certain, at least, of the lower animals; to employ he or she, his or her, who, whose, whom, instead of it, its, which. “Are not these dumb friends of ours *persons* rather than things?” asks Dr. John Brown (p. 115); and I have little doubt that Sir Walter Scott, who, as his biographer Gilfillan tells us, “had lived much with the lower animals . . . and learned to understand their habits, and had entered further than most men do into their natures,” regarded the dog at least in this light, as Byron and many other distinguished authors have done, both before and since his time.

the brain;* whereas the *brain* is only *one* condition out of many on which intellectual manifestations depend; the others being chiefly the organs of the *senses*, and the *motor* apparatuses, especially those which are concerned in *prehension*, and in the production of articulate *speech*.”† To renounce the belief that mind is confined to brain; to admit that, in a sense, mind may be said to pervade the animal organism, or that at least, its development is partly dependent on other organs than the brain, is to give up opinions that have long been orthodox among all civilised nations. But such renunciation must extend to many other items of current belief; the student will be compelled to admit that instinct and reason differ only *in degree*; that both instinct and reason are to be found in man in common with other animals: that many animals feel, observe, reflect, judge, just as we do; and that in respect of morals—of disposition and character—many of them are infinitely *our* superiors. In truth, the researches of the student, who brings to the investigation an earnest love of truth, a freedom from prejudice, and the other qualities necessary in so difficult an inquiry, can scarcely fail to upset many opinions that are generally received throughout the world, and that constitute therefore man’s present orthodox belief in matters psychological; while they will establish on a firm and solid basis many views that are at present regarded as not only utterly heterodox and revolutionary, but even as subversive of religion and repugnant to common sense! What some at least of these heterodox opinions are will appear in the sequel. Meanwhile, it may be desirable to fortify my own conclusions by the opinions of certain authorities, whose names are sufficient to give weight or value to all they may have to say on any subject which they have carefully studied.

Lord Brougham, whose remarks on the relations of instinct to reason are admirable, thus writes:—“Naturalists, who could throw so much light upon” [the subject of animal reason] “confine themselves chiefly to the structure and functions of the organs, and leave the *mental* part of the subject out of view. Yet a physiologist, who also applied himself to this latter branch of the inquiry, would be the person best qualified to grapple with its difficulties and to throw light upon it” (p. 274). Unquestionably the accomplished physiologist is most competent to deal with the investigation—by experi-

* Goodsir points out the development of mental activity without brain (p. 366).

† Huxley (p. 102).

ment or otherwise—of the phenomena of mind in the lower animals. But such an investigation is so comprehensive and important, that it should not be restricted to the naturalist and physiologist. The physician and veterinarian, the psychologist and metaphysician—all persons of intelligence who have opportunity of studying the habits of animals—may with advantage share in the inquiry, and can furnish *facts*, whose value would be appreciated by the skilled investigator.

Professor Goodsir, with whose conclusions on the respective essentials of humanity and animality my own conclusions are mostly at variance, and who regards the mind of man as “an intelligence altogether *different in kind* from the *instinctively co-ordinated* intelligence of the brute” (p. 316), nevertheless admits that “We may . . . reasonably expect, by the careful investigation of the habits and actions of animals, to derive much important psychological knowledge. Such knowledge will ultimately assume the form of a sub-science—*comparative psychology*” (p. 308). Here I entirely agree with him, though I think he might safely have put the case much more strongly. The foundation in London of an “Institute of Comparative Pathology,” under the Brown bequest, will probably give an impetus—unprecedented in this country—to the study of disordered functions and organs in the lower animals; and I have little doubt its directors will see the importance of including among the investigations deserving of immediate attention the subject of *mentalization in animals*, both in health and disease.

In an admirable summary of the relations of animal instinct to human reason, a recent compiler thus represents most truthfully the present state of our knowledge of mind in the lower animals:—“The mental system of the lower animals is much less perfectly understood” [than that of man]; “and no sufficient observations exist to enable us to draw clearly the line between the *intuitive* and the *acquired* powers in any single species. The popular tendency has been to *underrate* the *acquired* knowledge of animals, if not to ignore it altogether. . . . At present we are not in a condition to dogmatise, owing to the want of proper observations in the whole department of brute intelligence.”* Just, however, as it is desirable to study fully the *acquired mental powers of animals*, it is equally so to investigate thoroughly the subject of *instinct in man*; for, as the same writer remarks, “In point

* Article *Instinct*: “Chambers’ Encyclopædia,” vol. v, 1863, p. 598.

of fact, men and animals alike possess both instincts and acquisitions.”* Hitherto, however, there has been no satisfactory treatment of either subject—whether in works of mental philosophy or natural history—of human medicine or veterinary science.

During the last two years I have myself been studying the subject of Mind in the Lower Animals, both in its normal and diseased conditions. The result has been a growing conviction on the one hand of the extent of our ignorance thereof and prejudice thereanent; and on the other, of the importance of a knowledge of its phenomena in relation to the *physiology and pathology of mind in man*. In the first place I, have read carefully a large number of the best class of works—both old and new—that treat generally of the habits of animals, or more specially of their instinct and intelligence, so-called. From these works, as well as from magazine and newspaper reviews thereof, I have collected a large quantity of material, illustrating the mental phenomena of the lower animals. In the second place, I perused the various definitions, analyses, or classifications of the human mind, or its faculties, to be found in our standard works of mental and moral philosophy, of metaphysics, psychology, and phrenology, carefully correlating—or at least attempting to correlate—the attributes of *mind* in man with the phenomena hitherto ascribed to *instinct* in other animals.

My results are so opposed to current opinion, and the whole subject is at once so novel, comprehensive, and important—not only in itself, but in its bearings on our knowledge of mind in man—that I venture to detail certain of my conclusions, in the hope that they may attract the attention of those who are more conversant than myself with such studies—are more competent to investigate psychological subjects, and have fuller opportunities for research, and more time for the exposition (by publication) of its results.

The immediate object of my study of mind in the lower animals, was to compare its *pathology* with that of the human mind, especially in reference to the inquiry whether other animals equally with man are subject to true *insanity*. I do not, therefore, profess to have gone at all exhaustively into the *physiology* of mind in the lower animals. I collected only sufficient materials to enable me to indicate the *kind*, or quality, of mind possessed by the lower animals as compared with man :

* Article *Instinct* : “Chambers’ Encyclopædia,” p. 597.

to set forth the general *resemblances* of the animal to the human mind. To treat the physiology of mind in animals adequately to its surpassing interest and importance, would require a lengthy and elaborate treatise. The subject is one which would, however, I believe, fully repay all the labour bestowed on it; and I trust that some competent authority, such as Bain or Maudsley, or still better, that both metaphysicians and physiologists, veterinarians and physicians, will forthwith appropriate it and give their best energies to its investigation.

The main object of my present paper is to lay down a basis for a subsequent essay on the *pathology* of mind in the lower animals. For such a purpose it is sufficient to indicate those qualities in other animals, which are in man attributed to mind, and which equally in other animals and man are liable to a derangement constituting *insanity*. It is, therefore, neither necessary nor desirable that I should enter at present on the extremely difficult—and, perhaps, insoluble—problems of (1) soul, spirit, or conscience in animals; that I should discuss (2) the relation of mind to size of brain or head, whether in man or animals; (3) the subtle distinction—if any really exists—between instinct and reason; or (4) the specific or essential *differences* of a psychical or mental kind that exist between man and other animals—between *animality* and *humanity*.

It would be utterly impossible within the narrow limits of a magazine article to cite *anecdotes*,* or cases illustrative of the mental phenomena or attributes about to be enumerated. Nor is such citation necessary, seeing that illustrations of the operations of mind in the lower animals can be found in abundance in the many excellent works that treat of their habits, instinct, or intelligence; some of the best of which I have deemed it desirable to enumerate as a bibliographical appendix to my present paper. Those who are interested in the subject will moreover find constant records—frequently of quite an authentic and trustworthy kind—in the public prints, illustrative of the mental endowments of animals; from which records, indeed, it is, in great measure, that the compilers of attractive popular treatises on the habits of animals draw their stores of information.

I had originally intended to analyse and arrange the mental

* Such anecdotes—more especially relating to the *dog*—are, nevertheless, “worthy of all the consideration which they can receive from the most philosophic mind.” (“Chambers Encyclopædia:” Art. *Dog*.)

attributes of animals according to some one of the best modern classifications or definitions of the *human mind* or its faculties. But I very soon found that this was undesirable, if not impracticable, by reason of the non-existence of any classification or definition that I can consider in all respects suitable or satisfactory. In all the natural sciences the classification and nomenclature of systematists are mere artificial or arbitrary contrivances to facilitate study by arrangements of *convenience*. The classifier perpetually violates that *law of continuity*, which pervades all nature and its phenomena; he draws rigid lines of demarcation where nature has links of connection, gradational changes, passage forms; he attempts clumsily and futilely to improve upon nature, making square, so as to dovetail into his theories, facts or phenomena which are naturally round. It is not surprising then that, applying his systems or methods to the analysis and arrangement of the very complex phenomena of mind, his classifications and definitions should abound in error, defect, or confusion. It is, indeed, highly improbable that we shall ever be in position simply, intelligibly, and at the same time scientifically, to define and classify the phenomena of mind. At all events, we are not in a position to do so at present; and it will only be when mind is studied in its most comprehensive aspect—not as confined to man, but as exhibited in the whole animal series, from its small beginnings up to its highest development—that the necessary data will be collected for generalising and classifying in the spirit of modern science.

According to ideas current among our most eminent writers on psychological science, mind consists of *emotion*, *volition*, and *intellect*. But *instinct* and the *senses* are so intimately related to, that it is impossible to dissociate them from, Mind.* There can be no doubt that much of what is assigned to *instinct* in the lower animals is really ascribable to *mind*, as it exists in man: while much of what is denominated mind in man is attributable to instinct, as it exists in animals. There is, in short, the strongest ground for the belief, on the part of several eminent modern authorities, that instinct and reason pass into each other by imperceptible gradations, and that they differ from each other *only in degree*.† M. Taine, one of the

* Professor Aitken, in his "Science and Practice of Medicine" (4th ed.: 1866), very properly, as I think, associates *instinct and sensation* with volition, emotion, and reasoning as *mental* qualities.

† "Reason is but a higher development of instinct," says A. W. Bennett, F.L.S., in "Nature," Novem. 10, 1870. "Whether it be instinct or reason, is

most recent writers on Intelligence, traces to our *senses* every source of knowledge. Leroy, too, says that "*Sensations* furnish the raw material of our ideas" (p. 138). Combe includes the "*external senses*" (touch, taste, smell, hearing, and sight) under the "*intellectual faculties*." Maudsley points out that *sensation* passes gradually into *emotion*; and that *intelligence* arises out of sensation in the process of mental development. Even in the writings of metaphysicians, psychologists, and phrenologists, there is the utmost diversity of opinion regarding the constitution or definition of *emotion*, *volition*, and *intellect*. Each term is used, sometimes in a comprehensive, sometimes in a restricted, sense. *Emotion*, for instance, may be held to include feelings, passions, sentiments, affections, propensities, appetites, impulses, instincts, pleasures, and pains; while some authors—such as Reid—assign appetites, passions, and affections to the *will*. Again, "*thought* without *will* is, we believe, a contradiction in terms. . . . Thought implies will or attention. . . . No such thing is even conceivable as thought absolutely without will."* *Attention* is an act of will; and *memory* usually involves a good deal of attention. *Will*, according to Combe, is merely "a peculiar kind or mode of action of the intellectual faculties" (vol. ii., p. 195). . . . "I consider intellect," says he, "as essentially constituting will" (vol. ii., p. 196). *Memory* again is "merely a mode of action of the knowing and reflecting faculties." "The *passions* are as different as the faculties" (vol. ii., p. 260). Hume includes hope and fear among the *passions*;† and regards joy and grief as merely mixtures of hope and fear. Combe, on the other hand, speaks of fear as an *emotion*. *Pleasure and pain* "are affections of every faculty;" they are "the result and not the cause of the particular faculties" (Combe). According to Maudsley, *sensation*, *perception*, *emotion*, and *volition* are essentially the same kind of *feeling*.‡ Different writers attach the most opposite meanings to such terms as moral sentiments; higher or lower sentiments; animal propensities, affections, appetites, feelings, emotions, instincts; reason, judgment, mind, and so forth;

only a question of *degree*," says Clayton (p. 217). Lord Brougham also expresses the opinion that there is "No specific difference, but rather a diversity of *degree*." Agassiz and Huxley are represented as holding similar views. (Trans. of the New Zealand Institute: vol. ii, 1869, p. 278.) Maudsley holds that in fishes and reptiles reason is gradually developed from instinct.

* "Spectator," Novem. 5, 1870.

† "Dissertation on the Passions."

‡ "Genesis of Mind," p. 476.

and even to the sciences which relate to a knowledge of the phenomena of mind, such as metaphysics, psychology, morals, and ethics. There is a still greater—more radical—divergence of opinion between popular and philosophical writers, as may be seen by reference to the definitions of such terms as mind, psychology, and instinct, given in the best standard dictionaries and encyclopædias, such as those of Noah Webster* and of Chambers.†

In my enumeration of the mental faculties or phenomena of animals, I have therefore avoided the pedantry of employing a metaphysical, psychological, or phrenological classification or nomenclature, and have preferred committing myself to no systematic arrangement and to the use of no strictly technical terms. The designations I have employed are those that, on the one hand, are in popular use, and that convey a meaning, which is at least quite as intelligible and precise as the terms in use among rival psychologists; and on the other, that have been used by all classes of writers on the habits of animals. The time approaches when it will become necessary to *revolutionise the nomenclature and classification* of the mental faculties that are common to man with the lower animals. Many of the terms presently in use are singularly inappropriate and mischievous. Their use is, moreover, a libel on the character of the lower animals, while it serves absurdly to exalt man at their expense. Thus, the very terms *animality* and *humanity* are, on the one hand, unnecessary distinctions; while, on the other, they are generally wrongly applied, for there is more animality in man and humanity‡ in animals than our self-conceit will permit us willingly to recognise. We cannot correctly speak of the *animal*, in contradistinction to the *human*, mind; inasmuch as mind is essentially the same in other animals and in man, differing simply in the *degree of*

* New York, 1831.

† Bibliographical Reference, No. 10.

‡ Youatt wrote a work on the "*Humanity of Brutes*;" and Jesse speaks with perfect appropriateness of the *humanity* of the dog. Gilfillan, in his "Life of Sir Walter Scott" (1870, p. 671), tells us that the great novelist "loved" his many "dear canine companions . . . for the *human* elements which they exhibited;" while Byron's reason for a similarly strong attachment to the dog was the very reverse one of their "unlikeness to men." Lord Monboddo and White speak of the *Human*-like character and appearance of the orang. (Maudsley: "Genesis of Mind," p. 86); and Ruskin writes, "There is in every animal's eye a dim image and gleam of *humanity*; a flash of strange light, through which their life looks out, and up to our great mystery of command over them, and claims the *fellowship* of the creature, if not of the *soul*."

its development, and in the *mode of its expression*. The so-called *animal* or *brutish* propensities are frequently more strikingly exhibited in man than in lower animals; and this word *lower*, so far as regards the morals or virtues of certain animals, most incorrectly designates their relation to man. Again, the use of the terms *brutes* or *beasts*,* *brutal* or *bestial*,† *brutality* or *bestiality*, is an insult to animals, to whom the application of the words *humanity* or *intellectuality*, might be more fitly made. In short, for present inappropriate terms, we must substitute others that more truthfully represent the relative endowments of man and other animals; and this is one of the many important fruits that may be expected to result from a comprehensive study of mind throughout the animal series, regarding man simply as an animal, psychically differing far less from his inferiors in the zoological scale than is at present generally believed.‡

II. *Illustrations of the Mental Endowments of Animals.*

I. *Natural Disposition or Character.*

Certain of the lower animals possess quite as much as man does a natural disposition or character, which includes both *virtues and vices*—amiable and unamiable, noble and ignoble, qualities. Not only, however, is there frequently a character pertaining to the species [*e. g.* timidity in the sheep; peacefulness in the dove; cunning in the fox; fidelity in the dog; patience in the ox]: but among certain animals [*e. g.* the dog] there is an *individuality*,§ occasionally quite as marked as that which exists in man. Many are the eminent writers that have

* "What is a man—
If the chief good and market of his time
Be but to feed and sleep? A *beast*—no more!"
(Shakespeare.)

† Cowper, in his verses on Liberty, speaks of "all constraint" begetting
"In those that suffer it a sordid mind,
Bestial, a meagre intellect, unfit
To be the tenant of man's noble form."

Another Poet exhorts us to

"Move upward! working out the *beast*,
And let the ape and tiger die!"

It would, however, be at least quite as correct to speak of the ape and tiger working out the *man*! Lord Erskine used to speak of animals not as the *brute*, but as the *mute*, creation.

‡ "They are not then," says Menault (p. 114), "so very unlike *us*; and *we*, like them, are *animals*."

§ Goodsir speaks of the *personality* of man as "distinguished from the mere *individuality* of the lower animals." (P. 328.)

borne willing, cordial, and reverent testimony to the general amiability, nobleness, or gentleness of disposition of certain of the lower animals. Of the *dog*, Sir Walter Scott says, "He hath a nature noble and incapable of deceit He hath a share of man's intelligence, but no share of man's falsehood!" His admiration for the character of this animal was such, that he declared he "would believe anything of a dog."* "What is there," asks Blaine, "noble, generous, or amiable in man, which may not be found in the dog also?"† Dr. John Brown, referring to the now well-known "Rab," writes—"When I think of that noble head, with its look and eye of boundless affection and pluck, simplicity and single-heartedness, I feel what it would be for *us*, who call ourselves the *higher* animals, to be in *our* ways as simple, affectionate, and true as that old mastiff!"‡ Even Buffon, who, as Lord Brougham remarks, was "sceptical beyond all men of stories respecting animal reason," and whom he characterises as "the great adversary of brute intelligence," bears testimony to what he calls "ardour of sentiment" in dogs; of whom he says, "Neither ambition, interest, nor desire of revenge can corrupt them. . . . They have no fear but that of displeasing. They are, in fact, all zeal, ardour, and obedience—more inclined to remember benefits than injuries." Mons. Blaze asserts that "the dog most undoubtedly has all the qualities of a man possessed of good feeling;" while "man has not the fine qualities of the dog."§ Dibdin says dogs have "noble passions, and possess a rectitude which, if it be instinct, is superior to reason."|| Equally high have been the opinions expressed regarding the *horse*. Chambers' compiler remarks that "his conduct would do credit even to the bravest human nature;"¶ and that there is "no reason why cerebral development should not influence the *character* of a horse as well as that of a man." Whyte-Melville, the novelist, writes, "I will say that in generosity, temper, and fidelity there is many a woman, and man too, who might well take example from the noble qualities of the horse."** The *elephant* is described as of "mild disposition," a character that belongs to all the herbivora. Chambers' compiler says that the elephant discharges his duties "with a regularity of disposition which seems almost mechanical."††

* Jesse, p. 88.

† "Horæ subsecivæ," 1st Series, Preface, p. xlviii.

|| "Tour through England," quoted by Blaine.

** In his novel "M. and N," vol. i., 1869, p. 233.

† Introduction, p. xviii.

§ Jesse, p. 174.

¶ Article *Horse*, p. 7.†† Article *Elephant*, p. 17.

The greyhound is described as mild and gentle, possessed of a natural simplicity and peaceableness of demeanour. Jesse speaks of the "kindliness of disposition" of the Newfoundland dog; the "gentleness" of the Scotch deerhound; the "modesty" of the Irish wolf dog; and the "fine disposition and noble character" of the dog in general.* Certain monkeys of the new world—such as the *Ateles*—are of a gentle, or even amiable, disposition.†

Ant-life affords pictures of "toil, industry, perseverance, sagacity, courage, love, harmony, and amusement" . . . "attributes which have made one of the tiniest insects the permanent emblem of some of the highest virtues."‡ The *elephant*, at the other end of the scale, is characterised by its docility, obedience, attachment, gratitude, memory, sagacity, intrepidity, self-sacrifice, and other high natural endowments. The *dove* is the emblem of tenderness, gentleness, meekness, peacefulness; while the *swallow* bears an equally high reputation for conjugal fidelity, maternal devotion, social love, generous provision for orphans, filial gratitude, and patriotic sympathy for the welfare of the race. The *ass* has a reputation for "staid sobriety of demeanour;" the *camel* and *dog* for "sedateness" of behaviour. The latter animal, especially, can wonderfully adapt its behaviour or demeanour to circumstances, becoming grave or serious where gravity is appropriate, cheerful where mirth is the order of the day, as is more fully pointed out under the head of *Sympathy*.

Of the specific virtues of the lower animals the following are illustrations:—

A.—*Affections*. 1. *Motherly Love*.—Of a Pomeranian bitch, which attended its offspring with all the solicitude of a human nurse, Clayton says "a human mother could have done little more, nor shown more genuine affection" (p.210). Among *bees* certain of the workers are set apart as *nurses* to watch and rear the young. The *elephant*; various birds, such as the griffon-vulture, and swallow; certain insects, such as the spider, ant, flea; and other animals, have given conspicuous evidence of motherly anxiety, tenderness, and watchfulness.

2. *Attachment to Man*.—Of *dogs*, Dibdin says they love their master so entirely "that their very existence seems to depend on his attention to them."§ Lord Byron paid a graceful and merited tribute to the memory of a Newfound-

* Jesse, pp. 81 and 89.

† Maudsley "Genesis of Mind," pp. 76 and 99.

‡ Chambers: Article *Ant*, p. 1.

§ "Tour through England," quoted by Blaine.

land dog, in a well-known "Address," containing the following lines :—

"Who labours, fights, lives, breathes for him alone.

To mark a *friend's* remains these stones arise.
I never knew but *one*, and here he lies."

Of a dog's friendship, Menault says "it is much warmer and more constant than that of man" (p. 332). Jesse remarks of their extraordinary *fidelity* to their masters, that it "puts to shame the vaunted superiority of many *human brutes*" (p. 93). Even Josh Billings says, as truly as quaintly, that "a dog is the only thing on this earth that lvs you more than he lvs himself."* Of the *Horse*, Chambers' compiler writes "Occasionally equine attachment exhibits itself in a light as exalted and creditable as that of the human species" (p. 13). The attachment of the dog to man is frequently characterised by its unselfishness, constancy, and devotion, for he sticks to his master or mistress through poverty and sorrow, and in spite both of neglect and ill-usage—a crucial test that *human* friendship cannot stand! Its affections are, indeed, both more true and enduring than those of man; and there have been many, besides Lord Byron, who have made the dog a closer or more real companion and friend than any fellow man or woman. The firmness of their attachment, together with their fidelity in positions of trust, and other admirable qualities, in which the dog successfully competes with man, have long led this animal to be selected for the guidance of the blind beggars of our streets. Dogs, we are told, lead about the blind "with an intelligent and affectionate solicitude highly worthy of imitation." The well-known address to "Poor Dog Tray" sets forth pathetically, but quite truthfully, the dog's services to man in this respect. The tenderness or gentleness with which the dog, elephant, and some other animals treat children—the care, watchfulness, or solicitude they bestow upon their charges—have frequently led to their being employed as *nurses* or *ayahs* to children. Clayton describes an elephant nurse as exhibiting, in the

* "Anecdotes illustrating . . . the intelligence and affection of *dogs* are familiar to every one, and form one of the most pleasing parts of many a book of natural history." Anthony Trollope, the well-known popular novelist, who is, however, obviously more conversant with *human* than with animal nature, speaks singularly of "affection and fidelity as things of custom with him"—the dog.—("The West Indies and the Spanish Main," Sixth Edition, 1867, p. 60.)

discharge of its duties, maternal anxiety and affection, fidelity to trust, care, watchfulness, forethought, and gentleness (p. 208). The cat, ass, horse, beaver, lamb, rat, ourang, chimpanzee, the *Ateles* and other monkeys, several birds, and other animals, frequently become nearly as much attached to their masters, mistresses, or children as do the dog and elephant.

3. *Brotherly Love*.—Several animals have been known to contract friendships with others either of the same, or of different, species. The *Ant* shows an *individuality* in its attachments. But it does much more. “The love of the community to which they belong is evident from the whole series of their proceedings, which all tend to promote the general good.” (Kirby.) . . . “They are ever intent to promote each other’s welfare.”* . . . “These observations bring to mind those ideal *Republics*, in which all wealth should be general, public interest serving as a rule of conduct for the citizens. It belonged only to Nature to realise this chimera; and it is only among insects, exempt from *our* passions, that she thought she could establish this order of things.” (Huber.) This active desire for the public good—for the welfare of the race, this social love, that occurs in the swallow and other animals, has been described as *Patriotism*, which Noah Webster tells us is the “noblest passion that animates a man in the character of a citizen.” There can be no doubt as to the nobleness of the passion; but *Patriotism* is scarcely a correct designation for it, so far as it is exhibited in other animals. The employment of such a term in such a sense, however, serves to illustrate the difficulty of designating the mental qualities of other animals by the terms currently in use among men. Many animals [Ex. the beaver, warren rabbit, and prairie dog of America; certain fish, *e. g.* herring; birds, *e. g.* *Loxia socia*, the Cape of Good Hope sparrow; and insects, *e. g.* locust, bee, ant, wasp] are social or gregarious, forming themselves into herds, flocks, droves, troops, bands, shoals, schools, or swarms, sometimes from the sense of mutual benefit derivable from number.† Some animals show a partiality for man’s society [Ex. dog, horse, Egyptian vulture]; while others are eminently unsociable [Ex. the hamster rat], or show an aversion to human society [Ex. hyæna]. Certain animals [Ex. among the carnivora] probably become solitary and unsocial by reason of the difficulty

* Chambers’ compiler : article *Ant*, p. 24.

† See also what is said under the head of “*Combinations for mutual Benefit*,” and subsequent five sections.

of procuring food within the same limited area for large, or even small, numbers.

4. *Attachment to Locality*.—Various animals manifest a wonderful knowledge and memory of places, a love of home, affection for birth-place, or for scenes of first love, or strong local associations [Ex. dog, horse, cat, swallow]. Instances of cats and other animals finding their way back from great distances over unknown country to their former homes “cannot be explained on any ground or principles known.” Milne-Edwards (p. 174), however, says that the dog and horse when lost, seem to retrace their course by the ordinary senses. But in the case of the swallow and carrier-pigeon, which fly in a straight line for very distant homes, he supposes the existence of “organs of sense of a kind unknown to us.”

B.—*Generosity and Benevolence*, sometimes amounting to absolute self-devotion, self-denial, or self-sacrifice—to what in man would be called *heroism* of the most exalted kind [Ex. dog, horse, elephant, certain birds, ant]. Dogs have fed, and thus rescued, lost children, while themselves starving, by conveying to them supplies of food. Frequently they have paid with their own lives for their generous protection of the weak or suffering. Many writers have testified to the “generous disposition” of the dog. Maudsley quotes instances of benevolence on the part of a canary to an orphaned nightingale: and of swallows to a captured companion.* He also points out how kindness or benevolence is sometimes developed in the *Simiadae* as the result of fear.†

C.—*Gratitude*.—Many animals [Ex. dog, horse, elephant, ant] are capable both of entertaining and expressing gratefulness for benefits conferred—such as relief of wounds, or defence against oppression; and of remembering and repaying the said benefits. Gratefulness is sometimes a cause of attachment, though not a common one. The elephant, by reason of it—gratitude alone—“might well put to the blush many who lay claim to a higher position in the scale of intelligence.”‡

D.—*Fidelity* to trust—to patrons, leaders, masters, § friends—is in many animals—especially the dog—characterised by utter disinterestedness, inflexible integrity, unbribable honesty. There are frequent instances on record of dogs dying rather than abandon a trust.|| Both elephant

* “Genesis of Mind :” pp. 491, 492. † Ibid, p. 76. ‡ Chambers, p. 22.

§ Byron, in his “Darkness,” says, the dog will be “faithful to a corpse, and keep the hounds and wolves away from it.”

|| Jesse, pp. 93 and 449.

and dog are capable of the faithful execution of a trust though away from their master's eye. Hence the frequency with which dogs are employed as messengers—taking charge both of money and food; or as protectors of the abodes and property of their masters, in which latter duty their vigilance and trustworthiness are proverbial. [Ex. the mastiff.] Elephants so value their leader, that in danger they place him in their centre, and defend him with their own lives. The elephant executes his master's orders "with haste, but without precipitation, for his movements are always deliberate;"* while the dog delivers messages "with a seriousness befitting the imagined importance of his mission."† A dog's honesty stands the test of guarding game, or other food belonging to his master, while himself starving. Various birds, and the bee, also exhibit, in different forms, fidelity or honesty.

E.—Courage.—Many animals show a wonderful amount of spirit, daring, boldness, bravery, firmness, or intrepidity. [Ex. dog, horse, elephant, monkey, pig, mule, ass, certain birds—night-hawk, and raven—some fish, and the ant.] The courage of the dog is sometimes invincible and to the death. Jesse gives instances in the Irish wolf-dog and Scotch deer-hound.‡ The war-horse partakes in the warlike passions of his master; his bravery has been tested on many a fatal field, including the scenes of the present Franco-Prussian War. As long ago as the time of Job (xxxix, 22), it was acknowledged, as an attribute of the horse, that "He mocketh at fear, and is not affrighted." Equally marked is the intrepidity of the elephant on the battle-field. Even beetles show an unflinching fortitude, even to the death—for when counterfeiting death they will suffer themselves to be gradually roasted "without moving a single joint."§ What could an American-Indian brave, or a Scottish covenanting martyr, have done more? Even

"The smallest worm will turn being trodden on :
And doves will peck in safeguard of their brood."

F.—Emulation.—The horse and dog, especially, not only exhibit personal rivalry, struggle for victory, but they evidently *understand the spirit* of emulation, and they display in it an eagerness, ardour, enthusiasm or vehemence that at least rival these qualities as displayed in man's contests. Un-

* Menault, p. 256.

† Jesse, p. 176.

‡ Ibid, p. 89.

§ Chambers, article *Spider*, p. 8.

fortunately their contests further resemble man's in their thorough knowledge of the advantage, and in their consequent use, of unfair devices for insuring their own success and the defeat of their rivals. Among horses, "the racer and hunter seem to *know the object* of their exertions, and to be as keenly bent upon it as their riders."* They enter thoroughly into the *spirit* of the struggle. At the last meeting [Janry., 1871] in Edinburgh of the "Scottish Society for the Prevention of Cruelty to Animals," Mr. Scot-Skirving, of Camptown, stated that "Horses sometimes . . . over-worked themselves in the pleasure of the chase, so that they fevered and died . . . from pure excess of pleasure." While Councillor Gowans confirmed this assertion by stating that, in hunting, "Many horses would go on till they died, if they were allowed to do so."† In the wild state stallions have furious contests for supremacy. The Eskimo dog rivals as to ardour the horse in racing. Greyhounds and other dogs will course till they die of sheer exhaustion. We owe, it is said, some of the most beautiful singing of birds, in part at least, to their rivalry or emulation. The "singing matches" in which birds—such as the canary are the performers—are analogous to the racing or coursing of the horse or dog: utter exhaustion is frequently the fruit of persevering exertion.‡ The rivalry of a strange queen bee in a hive gives rise to mortal combats, the survivor reigning: while that of a dowager queen frequently lead to emigration, and the foundation of new colonies.§

G.—Caution is displayed in many forms by many animals, especially by those which are the sport or prey of man; or whose very existence, in the midst of dangerous enemies, depends on the appropriateness or efficiency of their means of escape or defence. The horse, ass, and mule are proverbially so cautious on dangerous ground, as on alpine tracks or treacherous morasses, that the traveller, if he is wise, trusts himself implicitly to their guidance. The dog-leaders of dog-teams, among the Eskimo, elephant-leaders of elephant-herds, stallion-leaders of wild-horse troops, all exhibit the quality of caution in a high degree in their reconnoitering expeditions. They send before them *scouts*, they plant *sentinels*; and they use *signals*, which are infinitely more intelligible to every member of the expedition than telegraph messages are too frequently to us. They adopt *precautions* for safety and against danger; they have obviously an estimate of the *nature and*

* Chambers' "Encyclopædia," art. *Horse*. † "Scotsman," Jany. 13, 1871.

‡ Maudsley: "Genesis of Mind," p. 492. § Milne-Edwards, pp. 169 and 170.

degree of peril, with a knowledge of, and faith in, the best means of escape or protection. They can distinguish more-over real from sham danger, and speedily detect the nature of "boggles" or "scarecrows." The wolf, wild-horse, hippopotamus, coney (hyrax), ant, and other animals show different kinds or degrees of wariness. The marmot and flamingo have sentinels.*

H.—Obedience [docility, submissiveness, tractability] is shown, not only to man by such animals as the dog and horse, camel and ox; but to the authority of parents or leaders, or of public law [Ex. dog, horse, elephant]. Even the volatile ape shows obedience to a chief. This implicit obedience frequently arises from confidence in the superiority—whether moral or physical—of man; or of leaders [Ex. Eskimo dog]; or from their recognition of the respect due to parents, old age, or established *law*. The respect of the dog for man frequently amounts to *reverence*; so that it has been said, first by Bacon and then by Burns, "man is the *God* of the dog." Leroy points out that the special affection of a creature for one of a superior order may be considered a semi-religious state of mind; so that the *reverence* of the dog for its master—involving frequently a devotion so absolute and self-absorbing—may be regarded as, in a sense, a *religious sentiment*.

I.—Patience [endurance, forbearance, resignation] even under injury or cruelty, is exhibited by the dog, cat, horse, ox, camel, ass, and ant. Many carnivorous animals display a degree of patience, that in man would be marvellous, in watching for their prey [Ex. fox, cat, and owl]. The camel and elephant again—as well as the dog, horse, and other animals—can wait most patiently the opportunity for vengeance.

J.—Industry [diligence]. Many animals display both willingness and capacity for labour or toil of the severest kind [Ex. horse, dog, elephant, hamster rat, spider, ant]; while the "busy bee" is an emblem of quiet, unostentatious, persevering industry. In their labours, these and other animals show, on the one hand, a large amount of *energy*; and, on the other, of *perseverance* [Ex. dog, ant]. Energy or activity is exhibited by the pointer and setter dogs in pursuit of game; by the shepherd's dog in the discharge of its useful duties; by the horse and ass, elephant, various fish and birds, and the ant—that embodiment of all the virtues.

* Milne-Edwards, p. 173.

K.—Providence [forethought, or foresight, including frugality or economy]. The hamster rat stores up provisions for the winter; the jerboa lays up magazines of food; while the squirrel, bee, beaver, dog, ant, and other animals have similar cumulative or store-forming habits—make similar timely provision for winter, scarcity, age, or other contingencies. “The *Lagomys pica*—a Siberian rodent—not only lays up a store for the winter, but he turns his grass into hay *exactly as our farmers do* before he stores it.* The dog has been known even to accumulate or save money.†

There are many other *Virtues* that characterise certain of the lower animals, which, however, it is unnecessary to specify at present. They include, for instance, *Dignity*‡ [Ex. dog]; *Meekness* [Ex. lamb, dog, elephant, certain birds]; *Good temper, Feeling, or Humour*; *Love of Approbation* [dog]; *Shrewdness* [dog]; *Tact* [dog]; *Independence* [dog]; *Discretion* [dog].

With the foregoing *good* qualities are associated in animals many of an opposite kind—some of them amounting to *vices*; of which the following furnish illustrations. Toussenel tells us of the sparrow, that he is “quarrelsome, a chatterer, tippler, jeerer, plunderer, babbler, impudent, familiar, riotous, and obstinate.”§ The character of the owl is said to be taciturn; the heron melancholy; the gull insatiable and clamorous; the magpie inquisitive, boasting, and thievish (Menault). The monkey has a general reputation for mischievousness, selfishness, cruelty, intractability, and incapability of moral self-control. The *Cynocephali* are in particular cruel, of changeable or capricious disposition, exhibiting short-lived affections, delighting in malice, deriving satisfaction from the exercise of despotic power of might, bullies and tyrants—but at the same time fond of their young.||

A.—Obstinacy.—“There are perverse dispositions, which nothing can alter, and upon which *education* is thrown away.”¶ The obstinacy of certain animals, however—such as the mule—is probably, in great measure, due to bad usage by man.

B.—Laziness.—The turnspit (dog) hides itself to avoid irksome duties; while, with the same object, other dogs feign lameness.** Some bees and other animals are veritable

* Milne-Edwards, p. 156.

† Jesse, p. 163.

‡ With its contrast, it is well represented, pictorially, in Landseer's “Dignity and Impudence.”

§ Menault, p. 103.

|| Maudsley: “Genesis of Mind,” pp. 74 and 75.

¶ Leroy, p. 219.

** Jesse, p. 419.

"loafers"—*idlers*, doing nothing but availing themselves of the labours of their honest, industrious fellows.

C.—*Dishonesty*—amounting sometimes to *theft*, *robbery*, or *piracy*. Spiders are occasionally "Piratical cruisers that act the part of sea-kings in their little domains."* Bates tells us that the Urubu vulture of Brazil, in its search for food, enters kitchens and *robs* saucepans by lifting the lids with its beak, exhibiting thereby both observation and *experiment*, reasoning, reflection, and judgment.† The raven, too, is a well-known thief. Some bees are dishonest, appropriating, by trick or force, the work or property of their honest companions. One colony of bees frequently robs or pillages another of its store of provisions.‡ The baboon is noted for its unfaithfulness to trust; and the chimpanzee and monkey for theft.§

D.—*Vindictiveness*—resentment, revenge, vengeance—[Ex. mandrill, camel, cat, dog, ant]. The camel is described as naturally spiteful, malicious, and unforgiving. The cat also is said to be spiteful. In the dog and elephant revenge is generally traceable to bad usage by man; their resentment is usually, if not always, under a sense of injury, which is long remembered, and for which punishment is *designed*.

E.—*Antipathies* (dislikes). The pug (dog) shows strong, and sometimes strange, dislikes.

F.—*Cowardice*.—The wolf, hyæna, turnspit (dog), and various birds show it in different forms or degrees.

Among other unamiable, or ignoble, qualities in animals are to be found *treacherousness* or *stealthiness* [Ex. cat, turnspit dog]; which, however, is frequently merely a development of that *cunning*, which is necessitated in many animals by the snares and sports of man. *Selfishness* [Ex. cat and monkey], which is also developed by the struggle for existence in wild or game animals. *Intractability* (cat and monkey); *Sullenness* or *Moroseness* (camel, cat); *Petulance* (monkey); *Impatience* (monkey); *Mischievousness* (monkey); *Tyranny* or *Bullying* (the cur dog); *Quarrelsomeness*, *Pugnacity*, *Combativeness* (dog, quail); *Stupidity* (ostrich).

There are certain other mental qualities that constitute important features in disposition or character; but which scarcely belong to the category either of virtues or vices, though they may influence or modify both. Such, for instance, are—

* Chambers, art. *Spider*, p. 18.

† Clayton, pp. 212-3.

‡ Milne-Edwards, p. 170.

§ Maudsley: "Genesis of Mind," p. 74.

A.—*Vivacity*—especially in the young. The spaniel is merry and cheerful; “all life and animation,” says Jesse. The monkey is pre-eminently lively and playful. The “gam-bols” of the lamb are proverbial. Ants have their games and sports; and even work-horses have their Sunday amusements or recreations. The spirit of frolic in the latter class of hard-worked animals is made the subject of some versification by Robert Chambers.* The mocking bird carries its playfulness or self-amusement to the extent of serious practical jokes, decoying and terrifying other birds. Thus Dr. Good says, “It is . . . playful enough to find amusement in . . . deception, and takes a pleasure in decoying smaller birds near it by mimicking their notes, when it frightens them almost to death, or drives them away with all speed, by pouring upon them the screams of such other birds of prey as they dread most.”† Humboldt tells of a Capucin monkey which was accustomed to catch a pig every morning, “and mounting on its back, to ride it for the rest of the day.”‡

B.—*Curiosity* (inquisitiveness), baboon, narwhal, goat, dog (Jesse).

C.—*Pride*—sometimes characterised as “aristocratic pride” of the dog and horse.

II. *Acquired Disposition or Character.*

Experience and education, the struggle for existence in the wild state, training by, and association with, man in the domesticated condition, *form the character*, just as circumstances do in man. Just as in man, moreover, the influence of circumstances may be either for good or evil, though, unfortunately, in the case of animals, the latter predominates. For instance, *cruelty* in the torture of captured animals has been assigned to man’s teaching, and has been described as an *acquired instinct*.§ On the other hand, “horses have been taught . . . to conduct themselves with a propriety almost human.”|| Dogs, like children, can be trained to exhibit “company conduct”—a wonderful degree of self-control towards, and in presence of, each other. Thus Jesse narrates one case in which a party of 80 to 100 dogs were “drilled into the best possible behaviour to each other” (p. 337); and

* “Work Horses in a Park on Sunday,” in “Select Poems on Kindness to Animals,” “Chambers’ Miscellany,” revised ed., 1870, vol. vi.

† Combe, Vol. I., p. 518.

‡ Maudsley: “Genesis of Mind,” p. 75.

§ Maudsley: “Genesis of Mind,” p. 78.

|| Chambers, art. *Horse*, p. 27.

he quotes the celebrated Milan poodles, of 1830, which were trained to give gravity and attention to arithmetic, orthography and card-playing, as well as to engage in histrionic display; one dog, naturally of a "sedate disposition," representing a "grave and serious personage," walking with dignity, and "absorbed in reflection," the other being "young and giddy" (p. 333). There can be no doubt of the effect of *kindness* in educating and developing the *best* qualities of the dog and other animals; and equally little of the influence of man's bad example or cruelty in drawing out the worst features or dispositions of animals, in whom the virtues naturally preponderate. The contrast between the wild and domesticated state, as exhibiting the deterioration of character produced by man's influence, is frequently—as in the case of the horse, ass, mule, dog, elephant, and camel—very marked. In truth many, if not most of the defects, faults, or vices of the domesticated animals are traceable, directly or indirectly, to evil example, mal-usage, neglect, or non-education, on the part of man! A strong argument this for greater attention and kindness to the lower animals by the masters to whom they prove so useful, not only as slaves or drudges, but sometimes as companions and friends.* What is, however, of more immediate importance in our present inquiry is the fact that *acquired* dispositions, or aptitudes, become *hereditary* in other animals as well as man (Leroy).

III. *Emotions and Passions.*

Menault describes the lower animals as being subject to the *Heartaches* that cripple life; the *Passions* that torment; the *Pleasures* that elate; and the *Pains* and disappointments that depress and annoy. The *Simiadae* are extremely emotional: they "exhibit, in an extravagant manner, all the inferior kinds of emotion."† They are capable of *laughter* from mirth, and of shedding *tears* from grief: for Le Cat says he has seen the chimpanzee both laugh and weep; and Humboldt makes a similar assertion regarding a small South American monkey.‡

A.—*Anger*, passing into hatred, fury, rage or ferocity [Ex. the baboon]. The turnspit (dog) exhibits cordial hate. The same feeling leads to frequent *quarrels* among ants. The *fight*s

* The existence of Societies for "The Prevention of Cruelty to Animals" shows that man is becoming alive to the *duty* he owes to lower animals.

† Maudsley: "Genesis of Mind," pp. 76 and 77.

‡ Ibid, p. 77.

and wars of many animals—such as the elephant, reindeer, wolf, stag, dog, and even the spider—are marked frequently by a singular degree of *ferocity*. What, however, is often improperly called “ferocity” in such animals as the boar, pig, mule, ass, is simply a combination of courage and desperation—the fruit of a sense of injury when baited or badgered by man.

B.—Grief [sorrow, unhappiness, misery]—in every degree—is exhibited by the dog especially, and other domestic animals, in consequence of the absence, removal, or death, of masters; or from the fear of being left behind, killed, or sent away. Jesse (p. 418) speaks of the “unhappy look” of the turnspit. Blaine gives several instances of the *death* of dogs from grief at the loss of masters or parents.* Birds also suffer sorrow from disappointment. The nightingale and other birds frequently die in captivity.†

C.—Disgust.—Jesse tells us (pp. 387-8 and 406-7) that a good setter or pointer dog exhibits actions, or facial expressions, betraying intense disgust at the operations of a bad sportsman.

D.—Sympathy (compassion)—equally with joy and sorrow, mirth and grief—with *Human* emotions of all kinds—with suffering and distress in the young and weak of their own species. The dog, we are told, often seems “actually to *know* and sympathise with the joys and sorrows of his master;” his sympathy is actively expressed by the exhibition of *appropriate behaviour*. Various birds—such as the rook—show great consideration for, and a generous protection of, wounded companions; they manifest a charitable desire to relieve suffering; they tend the old and young, weak or sick, with solicitous care, constituting the most attentive of *nurses*.‡ Maudsley cites a case of active sympathy on the part of a canary for a suffering young nightingale.§

E.—Sensitiveness—to shame or punishment, to insult or ridicule, is frequently as keen in other animals as in man. Buffon mentions an elephant that knew when he was laughed at. Expectation, as in a child, is equally a source of joy and grief in the dog.|| The mastiff sometimes shows a keen sense of insult; and many—especially highly-trained dogs—when conscious of error or wrong-doing, of disobedience of orders

* Introduction, pp. xxiv., xxv., xxviii., xxix.

† “Genesis of Mind,” p. 492.

‡ See also what has been said as to *Nurses* under the head of “Motherly Love.”

§ “Genesis of Mind,” p. 492.

|| Jesse, p. 184.

under great temptation, show their keen sense of shame by their actions.

F.—Jealousy.—In pairing, says Leroy (p. 64), “Morality enters into love the idea of mutual possession is established jealousy becomes deep-seated and logical.” Under other circumstances, also, birds display jealousy, as well as anger, fear, and envy. Leuret mentions a case of *jealousy* in a male canary, that made a fierce attack on a nightingale to which its mate had been kind.* Baboons distinguish the sexes of mankind, and are jealous of man’s attentions to woman.† All pet dogs are jealous of disposition.

G.—Suspicion also is easily engendered in many animals, especially those which are apt to be trapped or snared by man, or which are the victims of his cruelty. Jesse (p. 418) describes the turnspit as having habitually a “suspicious look.” The experienced shark fears and suspects the bait; old sparrows and crows show fear and suspicion in refusing poisoned food.‡ Fear and suspicion exist, in all their grades, in hunted animals, as a perversion of *cautiousness*. *Fear, Suspicion, Remorse*, and other passions are sometimes as influential for evil or good among other animals as in man [Ex. baboon, various birds].

IV. *Self-control* (Self-denial, Self-restraint, Self-discipline, Self-sacrifice).

Menault points out (p. 50) that some of the most deadly *serpents* can be disciplined “to keep under restraint the natural tendency to use their fatal fangs” and to “refrain from biting under the greatest temptations.” The *elephant* can so successfully conceal his emotions as to assume an appearance of perfect calmness of temper—“evenness of disposition”—while boiling over with resentment, and just about deliberately to repay injury. The horse, the Scripture tells us, “*hideth* his distress until he panteth out his spirit at the goal.” In connection with self-control, various animals display remarkable *presence of mind* in sudden and unforeseen danger. Thus spiders and beetles will simulate stupor or death to escape threatened injury or enemies; and the latter will permit themselves to be dismembered, or roasted alive, without flinching. The corncrake and fox also feign death, and the dog lameness, when a suitable *motive* presents itself.

* Maudsley: “Genesis of Mind,” p. 493.

† Ibid., p. 77.

‡ Maudsley: “Genesis of Mind,” p. 492.

The leaders of troops, herds, teams, or flocks, are called upon habitually for the exercise of the two important attributes of self-control and presence of mind. The "happy families" of itinerant showmen, which frequently form part of menagerie exhibitions, display remarkably man's power of cultivating in animals of the most opposite dispositions self-control over their natural passions. Under such circumstances all kinds of feral animals are taught to live together in *harmony*. Almost literally "the lion lies down with the lamb;" a striking contrast to human society, where even the highest development of the religious sentiment fails to produce—in the persons of clergymen—anything like a similar degree or kind of harmony!

V. *Moral Sense* (Faculty, Cognition, Feeling, or Sentiment—Conception of Moral Relations).

The actions of certain animals—especially those which have been highly educated, such as the dog—show that they possess a distinct consciousness, perception, knowledge, or appreciation of the nature or meaning of right and wrong, of praise and blame, of rewards and punishments, of justice and injustice, of duty and its obligations, of trust and responsibility, of property and ownership, of moral and immoral actions, of honesty and dishonesty. The dog shows his consciousness of, and shame at, error or disobedience.* He possesses, to a greater extent than countless numbers of human beings, the "*mens conscia recti*."† Dr. Bennett, the Australian traveller, gives an instance of consciousness of wrong-doing in the gibbon;‡ and Du Chaillu describes a sense of wrong-doing and of shame in a young chimpanzee, which at once took to flight if caught in the act of depredation.§ Dogs show their sense of justice by disdaining any but a fair fight, refusing to take advantage of any injustice. They are capable both of feeling and showing *moral indignation* at wrong or wrong-doing. On the other hand, Reaumur

* Jesse, p. 424. Maudsley speaks of its "conscience-stricken tail dropped between the legs" ("Genesis of Mind," p. 72).

† The enterprising shopkeeper, who, observing on the sign-board of a rival on the opposite side of a street the—to him—puzzling phrase just quoted, and determining not to be outdone, inscribed, on his own shop-sign, what he considered the improved motto, "*Men's and Women's conscia recti*," might, with quite as much propriety, have extended his phraseology so as at least to have included *dogs'* also!

‡ "Wanderings in New South Wales," 1834, vol. ii., chap. viii., p. 156.

§ Maudsley: "Genesis of Mind," p. 74.

observes that, "The spirit of injustice is not so peculiar to man as it is thought. It is found in the smallest animals. Amongst insects, as amongst men, the goods of others will be usurped, and their work appropriated"—as has already been pointed out under the head of *Dishonesty*. A dog's sense of duty, or of trust and responsibility, will lead him to *die* rather than abandon his post. Thus instances have been recorded of death by starvation while guarding abundance of food of the most suitable and attractive kind—game.† The dog has been frequently trained to the accurate delivery of *messages*, and to the faithful and zealous discharge of other difficult duties; while the elephant is also conspicuous for the willing and skilful performance of the labours to which he has been trained by man. "The notion of *Property* incontestably exists among rabbits *Old age* and the *rights of paternity* are held in high esteem by them."‡ The mastiff shows a sense of *dignity*; while parent dogs sometimes mark their opinion of an immoral act—such as theft—in their progeny by *punishing* it. *Conscience* then—which has hitherto been regarded as the peculiar attribute or characteristic of man, as compared with other animals—exists equally in these so-called *Lower* animals. "Conscience is *a growth*" (says the author of the article "Ethics" in "Chambers' Encyclopedia") "which warns us that we do wrong. . . . The child is first taught obedience *by penalties*, and is made to associate pain with forbidden actions. This is the germ of conscience." As much as this may be said of many young animals, which are taught by their parents or trained by man. This—the "conscience grounded on fear"—animals undoubtedly possess. Whether they possess also the gradually developed "conscience grounded on spontaneous approval," is one of the many probably insoluble questions that arise in comparing the mind of other animals with that of man. However, "the great mass of *Human* beings have nothing more than the slavish conscience, or the habits imparted by the exercise of the parental and public authority; which shows what is the most natural foundation of *Moral Sentiment*." This much, at least, the lower animals have in common with man; in them a knowledge of right and wrong may be produced by education in the same way as it is in the child. The "contradictory consciences" that exist in human societies or peoples, and "intuitive morality"—if such a thing exists in man—are quite as

* Menault, p. 33.

† Jesse, pp. 176 and 410.

‡ Leroy, p. 49.

likely to occur in other animals. *Vice or virtue* in animals may be produced and cultivated by man. They may equally be *taught* expertness in theft, or self-control to the extent of self-sacrifice. Their masters may, therefore, *make their moral sense*, just as that of the child is gradually developed by example on the one hand and precept on the other.

VI.—*Memory* (Remembrance)

of persons, things, and places—of kindness and cruelty—of benefits and injuries—is exhibited by many animals. [Ex. dog, cat, horse, ass, elephant, camel, and some fish.] Even the tortoise remembers persons and places. They frequently show their *recognition* after long severance of all associations. Plato held that the dog, who barks at people he does not, and wags his tail at those he does, know, must be a philosopher. Memory is, moreover, along with observation, the basis of their education. The parrot is supposed to have a special memory for *words* or phrases, and we speak of “parrot-learning” as synonymous with “learning by rote”—a mere mechanical process—a mnemonic accomplishment independent of intelligence or understanding. But this is just one of the many popular libels or fallacies that exist regarding the mental endowments of animals; for the parrot could not exhibit its feats of speech had there not pre-existed attention, imitation, and other mental qualities. We shall see, moreover, in the sequel, that animals not only *understand* each other’s language, but *man’s*, and not only his looks or actions, but his *words* and phrases. The application of the term “parrot-like,” to mere mnemonic effort is not, therefore, correct or appropriate. The parrot must have some understanding of the meaning of the phrases it has learned and repeats, for it *varies its expressions according to circumstances*.*

VII.—*Observation*.

Many animals show great acuteness of observation of, the closest *attention* to, natural phenomena, the doings of man, or the movements of their enemies. [Ex. dog, cat.] Lord Brougham refers to their “minute and exact *observation* of things, which escape *us* in the greater multitude of our ideas and concerns,” as illustrating “how well animals can profit by *experience*, and draw correct *inferences* from their observa-

* Maudsley: “Genesis of Mind,” p. 490.

tions" (p. 270). So close or keen have been their habits of observation in some cases that the results have been regarded as preternatural *presentiments*, e.g. in the dog, when apprehension or presentiment of danger has led to the saving of human life or property, to protection from murder or robbery. Close attention to the signs of the weather renders many animals the most trustworthy of *weather prognosticators*. (Ex. Eskimo* and other dogs.†) "The wild rabbit is the best of weather prophets‡ It interprets the meteorological signs far more shrewdly than man, and *acts* on its interpretation."§ By observation, animals acquire a considerable *knowledge of natural phenomena*—such as those of action and reaction, gravitation, the power of the lever, momentum, and of certain principles of pneumatics, hydrostatics, hydraulics. They become acquainted with the displacement of fluid by solid bodies; the increase of impetus by distance of fall. They construct their rafts from observing the floating of timber, twigs, and straws. Dogs and other animals very soon acquire the ability to distinguish the strange from the familiar. If a strange buck attempts to join a herd of reindeer does the result is a fierce onslaught upon him by the "haldar," or leader, and a conflict ensues which is scarcely to be surpassed for its "rage and fury."|| If a strange dog gets into a large flock of sheep, or a strange bird into a large assemblage of its species, it is at once detected and punished—sometimes by death. It is partly on this principle of the *recognition* of the strange as contrasted with the familiar—of beggary as compared with gentility—that the use of the watch dog is founded. By the elephant, "food, friends, and foes appear to be detected with great certainty, and at a considerable distance."¶ The bison and other ruminants recognise their masters only under certain circum-

* Throughout this paper I have used the word "Eskimo" as the shortest modern equivalent of the older term "Esquimaux." On the spelling of the words in question, as well as of Eskimo words in general, I have remarked in a contribution to the "Lichen-Flora of Greenland" in the "Transactions of the Botanical Society of Edinburgh." Vol. x, 1870, p. 304.

† Jesse. P. 389.

‡ The poet very truly states it that in certain animals as in man—

"Old experience doth attain

To something like *prophetic strain*."

§ "Spectator," Nov. 26, 1870, Art. "On the indifference of animals to speculative truth."

|| "Reindeer Hunting," *Chambers' Journal*, 1870, p. 827.

¶ Chambers: Art. *Elephant*, p. 4.

stances.* The hive bee destroys all strangers.† Ants know the sex and destination of each egg.‡

VIII. *Imitation*

implies more or less close observation or attention. Many birds [Ex. parrot, starling, blackbird, jay, and jackdaw] and certain other animals, such as the ape or monkey, imitate a great variety of natural sounds; while the dog, monkey, ourang-outang, parrot, and other animals mimic the behaviour of man. Imitation is "very powerful" in the mocking bird (*Turdus polyglottus*). "It possesses an instinctive talent," says Dr. Good, "of imitating the note of every other kind of singing bird, and even the voice of every bird of prey, so exactly as to deceive the very kinds it attempts to mock."§ The powers of imitation in animals are, like most other of their mental qualities, susceptible of high cultivation and perfection.

IX. *Stratagem*—(Artifice; Cunning; Finesse; Subterfuge; Duplicity; Deceit; Craft; Stealthiness;)

is exhibited mostly as a substitute for physical strength, or by animals that are weak as compared with their enemies. With many of the carnivora it is a necessity in their struggle for life. It includes precautions for safety, and implies much experience, observation, reflection, judgment, device or design, ingenuity, perseverance, patience, and other mental qualities. The fox is proverbially regarded as the emblem of cunning, and the cat of stealthiness. But there are many other animals that have habitual or occasional resort to cunning or stratagem in some form. Thus the dog substitutes stratagem for force when it feels itself weaker than its enemy or its work. Shetland ponies sometimes show the deepest cunning. The wiles and blandishments of female decoy elephants render them "the very impersonations" of deceit. The craft of the spider is illustrated in its well-known poetical address to the fly. The lurcher dog is used by poachers in their nocturnal depredations; while other dogs have conducted thefts of sheep on the large scale, and for long periods, with wonderful secrecy and adroitness (*e. g.* the once well-known "Yarrow.") The

* Milne-Edwards: p. 173.

† Ibid., p. 171.

‡ Ibid., p. 170.

§ Combe: vol. i., p. 518.

crocodile, too, has a popular reputation—well deserved—for cunning; and the value of “crocodiles’ tears” has become a figurative bye-word. The leopard, fox, rat, various birds—such as the raven and owl, and certain fish—all exhibit manifestations of stratagem or craft in the capture of their prey, or in their precautions against their enemies. Thus some animals take pains to confuse or obliterate traces of their retreat or track. Animal stratagem includes the fair or unfair devices by which in the rivalry of the race, for example, one horse gets the better of another; or one idle, dishonest dog or bee benefits by the work of the industrious and honest. Horace’s “*Sic vos non vobis*” is quite as applicable to many other animals as to man!* The dog exhibits sometimes *Secretiveness*—hiding things, usually for wrong uses.† Cunning is a common attribute of the *Simiadae* (Ex. monkey and chimpanzee). The baboon is capable of the most ingenious simulation or stratagem for the concealment of crime or the attainment of its ends.‡ The oft-quoted anecdote of the monkey using the cat’s paw to get the chestnuts out of the fire is a good illustration of Simian cunning—even were the incident itself apocryphal. Maudsley quotes instances of ingenious stratagem in crows and sparrows.§

X. Will—(Volition; Determining Power)

is shown in many animals in the form of resolution; determination; decision leading to immediate and appropriate action; deliberation or choice; and perseverance. [Ex. Dog, wild horse, cat, spider, ant.]

XI. Imagination.

The exercise of the Fancy is common among dogs in their frequent condition of half-sleep during repose. Leroy tells us that it is often in operation in the formation of their ideas; while Jesse informs us in addition that the dog frequently has “strange fancies” (p. 20). Combe regards *imagination* and *conception* as different degrees of the same power. The latter he defines to be the act of forming *ideas*—“depending on internal causes and without the interference of an external object.” (Vol. ii., p. 200.) Hope and fear are common among animals; and imagination is the source of both.

* See also what has been said under the head of *Dishonesty*. † Jesse, p. 164.

‡ Maudsley: “Genesis of Mind,” p. 76.

§ Ibid., p. 488.

XII. *Abstraction.*

There can be no doubt that animals have, and exercise, the power of *generalizing ideas*. A recent reviewer writes:—"Animals abstract as well as we do, though not so much, and they have a very clear conception that similar signs precede similar consequences. There is plenty of abstraction necessarily implied in the intellectual feats" of which they are capable. Clear abstract ideas, for instance, lead to the avoidance of danger—such as the snares of man; for the hunted wolf or fox forms a distinct abstract idea of peril. The ourang and chimpanzee have the power of generalising.* Wild birds have an abstract or general idea when they fly from man, on account of the destruction, which they have learned by experience, he commits among them; and tame ones when they approach him with confidence for the benefits they know he can and does confer.†

XIII. *Understanding*—(Comprehension).

Dogs and certain other animals (Ex. horse and ourang-outang) show a wonderful facility of comprehension as regards the object of man's actions—the meaning of his words—the language of his gestures—even the physiognomy of his expression, and the inflections of his voice—as expressive of approbation or the reverse—of anger or sorrow. The dog and elephant especially have an intelligent understanding of *man's wishes*; the former endeavours thoroughly to enter into sympathy, to place himself *en rapport*, with his master.‡ The whale and other animals comprehend the nature of peril and the object of human foes. Many animals have the faculty of finding out the meaning of circumstances which are of very urgent importance to the individual. The dog acquires by experience and education a wonderful knowledge of human language—even of the meaning of words; he can read his master's facial expression, and understands his looks; he comprehends easily his mood or feelings, and even his thoughts or intentions. "How notable, for example, is animal intuition in the quick apprehension by some animals of man's mood of mind from a glance at his countenance or from the tone of his voice."§ Clayton observes that the sounds of the

* Milne-Edwards, p. 173.

† Maudsley: "Genesis of Mind," p. 494.

‡ See also what has been said under the head of *Sympathy*.

§ Maudsley. "Genesis of Mind," p. 478.

voice, and the meaning of the words, of man are "understood by animals as distinctly and fully as they are by ourselves; and the intent and object of our actions are perceived by them in the same sense as we intend them to be perceived." Buffon and Menault tell us that elephants understand not only human signs and expressions of face—of anger or satisfaction; but sometimes even language—words spoken at times and under circumstances utterly free of significance. The same animals "display great sagacity in comprehending the nature of their task and adapting themselves to it."

XIV. *Reflection and Reasoning.**

The operations of many animals prove that they have the power of dispassionate and calm reflection and deliberation (Ex. elephant); that they can draw *inferences* or conclusions from facts; and that by reflection they can reduce these inferences to *principles* or laws (Leroy). They have a distinct perception of the relation of *cause and effect*, and act promptly and appropriately on their knowledge; they can discover the reason why? of many phenomena; they can foresee consequences, as the result of experience; they can calculate probabilities and act upon the results of their calculations (Ex. dog, ant): they hold councils and assemblies, at which they debate, discuss, consult, and argue; they can analyse and compare facts and experiences; they can plan, scheme, organise (Ex. ant, bee). The ass and dog are described as having frequently a "reflective" attitude or appearance. Buffon is forced to say of the elephant it "seems to *reflect, deliberate, think*, and not make up its mind till it has looked several times at the object without hurry and without passion." Of how many men now-a-days can so much be said? Animals "reason very acutely on particular phenomena of great importance to their own safety and life."† They reason "truly and much to the point," says Clayton. The ant, we are told, "thinks while she works, and realises her idea in her work. . . . Her idea is (gradually) understood by others; then all work together in common

* A French savant in 1843 devoted himself to the investigation of the *Reasoning Powers of Animals*, and exhibited some marvellous results in the dog and horse. (Chambers. P. 20.) Combe regards the *knowing and reflecting* faculties, as well as *judgment*, as mere "*modes of action*" of the mental faculties. In the same category he places *perception*, which is "a special kind of action of every intellectual faculty"—relating however to external objects. (Vol. ii., p. 199.)

† "Spectator," Nov. 26, 1870.

to carry out the plan which one has commenced." (Huber). Canon Kingsley in his "Letters from the Tropics,"* remarks, "If to foresee consequences from experience, and to adapt means to ends be the highest efforts of the intellect, then who can deny that the monkey proves himself a Man and a Brother and that he may by long and steady calculations about the convenience of Virtue and the inconvenience of Vice, gradually cure himself and his children of those evil passions which are defined as the "works of the flesh," and rise to the supremest heights of justice, benevolence, and purity?" Dr. Vimont assigns the faculty of *causality*—the perception of *causation*—to the elephant, ourang, and dog. The doubt, hesitancy, or indecision, of animals in difficulties implies reflection and reasoning.

XV. *Actuation by Motive*

has an important influence in developing the reasoning power of certain animals—such as the dog, elephant, and horse. Hogg, the Ettrick Shepherd, says, "I have hardly ever seen a shepherd's dog do anything without believing that I perceived his *Reasons* for doing it. I have often amused myself in calculating what his *Motives* were and I generally found them very cogent ones." Under stress of strong motives, "delicate and acute reasoning powers" are developed in the dog, stag, hare and crow. The faculties of reflection, analysis, inference, "and the memory of the result of all these processes, under great stress of motive, they will use to solve far more complex problems" than phenomena relating simply to their own safety.† The elephant and camel generally have an adequate motive or reason for avenging injury. The acts of many animals are "dictated by circumstances"—says Lord Brougham.

XVI. *Adaptation of Means to an End*,

and of the best means to a desired end—action suited to circumstances—are manifested in many of the operations of animals, who display, moreover, ingenuity in surmounting obstacles, fertility of resource in meeting emergencies, that require novel and effectual remedies. (Ex. elephant, ant, cat and other carnivora). The formation of pontoons by lemmings; and the navigation of streams in Iceland by mice on rafts

* "Good Words," April, 1870, p. 244.

† "Spectator," Nov. 26, 1870.

of turf or cow dung, are cases in point. Ants also form bridges or rafts of their own bodies. The elephant overcomes most ingeniously many mechanical difficulties; the dog has frequently discovered and circumvented the plans of murderers or robbers. Lord Brougham refers to the "*Rational* process of adapting means to the end, and of varying those means where the end cannot otherwise be attained." He also speaks of their fertility of resource in using means towards an end, and the simplest means to gain that end, which is "the highest reach of ingenuity" (p. 251). Still more strongly writes Leroy—when their ingenuity is "excited and perfected by circumstances and difficulties, the greatest human genius has nothing to teach them" (p. 63.) The direction of means towards the attainment of an end, implies a knowledge of the object in view, as well as intention or design; and involves the operation of observation and reflection, patience and perseverance, and other mental qualities. By "varying the food given to the larvæ, the working bees or nurses can change them from working bees or neutrals into females or queens;" they therefore adapt the food—as regards quality and quantity—to the age and sex of the young individual.*

XVII. *Skill*—[Dexterity; Expertness; Inventiveness; Ingenuity]

is manifested in many other ways than in adaptation to new requirements. Many animals make a skilful use of their natural tools—their paws, beaks, tails, and so forth; but it is only under the pressure of necessity, or by education or cultivation, that their mechanical skill and inventiveness are fully developed and displayed. Various birds and fish—the ant and bee, the rat, camel, dog, and other animals—exhibit much skill in the construction of, and in the repair of injury to, their dwellings. The Baya bird of India constructs its nest of such a form and in such a position as to be inaccessible to enemies.† Some spiders (*Mygalæ*) construct large, commodious, complicated dwellings, furnished with hinged doors.‡ Hive bees form store-cells for containing the provisions of the community; and royal cells for the female larvæ. They also

* Milne-Edwards: p. 169.

† Milne-Edwards, pp. 161, 163: who also describes (p. 165) the mode of construction of the beaver's dwellings and dams; and pp. 165, 167, wasps' nests. On this subject, *vide* the recent works of the Rev. J. G. Wood, on "Homes without Hands," and "Strange Homes," (1870).

‡ Milne-Edwards, p. 157.

“strengthen the combs when any accident threatens their safety.”* Ants, too, are capable of prompt and suitable action under accidents or emergencies.† The dexterity and power of contrivance in the elephant are, in association with his great strength, patience, perseverance, and fidelity in the discharge of duty, utilised in certain mechanical employments. Thus in piling timber at Indian seaports he “manifests an intelligence and dexterity which are surprising to a stranger, because the sameness of the operation enables the animal to go on for hours disposing of log after log almost without a hint or direction from his attendant.” In the horse, again, there is sometimes a “remarkable display of intelligence in such things as the opening of doors,” turning and again fastening taps of water-barrels, &c. “Necessity is evidently as much the ‘Mother of Invention’ among the lower animals as amongst ourselves.”‡ In the feats of agility to which they can be trained, some animals display a remarkable motor ability—co-ordination of muscular action, accuracy or precision in the movement of their limbs. Illustrations are to be found in the “performing horses” of equestrians; and in performing dogs and elephants, goats and fleas. The dog can be taught to take part in theatrical displays, in which it has to represent man, using its hind legs to walk upon and its fore legs as arms; in the same way it is trained to bell-ringing and other feats. The elephant can be taught to dance or walk on the tight-rope, play at ball, take part in jugglery, sweep courts, *write* even. It bore its share also in the theatrical displays of ancient Rome.

XVIII. *Arts.*

Many of the arts of man are represented—and frequently well represented—among the lower animals. Several of these animals are *architects and builders*. Bees construct cities. Ants sketch plans of work like an architect, and adjudicate on a variety of such plans—institute in fact a “competitive examination.” They build and repair their galleried dwellings “with wonderful sagacity, regularity, and foresight.”§ They possess *sculptors, masons*, and other classes of *artisans*. The spider too constructs—both as an architect and a weaver—the most beautiful and the finest fabrics. The beaver, in the for-

* Milne-Edwards, p. 168.

† “Spectator,” November 26, 1870.

‡ Ibid, 171.

§ Chambers, p. 31.

mation of his dams and dwellings, shows his knowledge of *hydraulic engineering* as well as of architecture. The hamster rat constructs galleried dwellings. The hive bee displays a knowledge of *geometry*, *mechanics*, and architecture; and all of these animals, as well as many others, exhibit a very high degree of *artistic skill*. The ant, moreover, is an *agriculturist* and provident husbandman; she prepares the ground, sows, tends, reaps, and stores crops and food.

XIX. *Perception of Sound or Tune, Time, Number, Order, Space or Distance, Colour, Weight, &c.*

(a) *Sound or Tune*.—Many animals have not only a keen sense of sound, but a *musical ear*, and musical taste, which is capable of a high degree of cultivation, and which in some cases may be said to be wholly an acquisition the result of education. Several animals have been taught to *dance*, or move rhythmically, to music—for instance the camel, dog, and ass, in Egypt; the dog, elephant, monkey, and serpent in other countries. Not only can the dog be trained to distinguish musical sounds and to keep time to music in dancing, but its musical knowledge sometimes becomes so critical that it possesses the power of detecting false notes. There have also been so-called “singing dogs,” trained like birds to an imitation of human voice-sounds. The ass, dog, and some other animals are said to be naturally fond of music. Its influence in the “charming” of serpents is well known. The lizard also gives marked attention to music. The elephant moves in harmonious measure, and in order, to music; he beats time (*e.g.* with cyrals) and takes part in a variety of musical displays. Various birds learn to repeat airs and whistle musically (Ex. canary, linnet, siskin, and bullfinch); while many are “musicians by nature.” The carp has been taught, by the sound of a bell, to come to be fed; and the gold-fish by a whistle. Even eels have been trained to recognise the voice of their keeper.*

(b) *Number*.—Several animals can estimate the strength of an enemy, whether this be man or other animals. An old crow is “capable of *counting* higher than many savage tribes appear to count.”† There have been “calculating” or “arithmetical” dogs, trained (like the celebrated Milan poodles of 1830) to a wonderful knowledge of numbers, figures, and

* Milne-Edwards, p. 172.

† “Spectator,” November 26, 1870.

order; they have been taught orthography, card playing, and the game of dominoes.*

(c) *Space or Distance*.—Raptorial birds form an accurate judgment of space in catching their prey, as well as of time or duration, making allowance for both in their swoop down upon their quarry. An Indian fish, without putting its own head out of its element, captures insects flying above its surface by spurring a drop of water at each; a procedure which must involve a knowledge of, and allowance for, the influence of the refraction of light.†

(d) *Time*.—The toad has learned to appear punctually every day at the dinner hour of a family by whom it was fed; and it speedily changed its period of appearing when it found the family dinner time postponed or advanced two hours.‡

XX. *Combinations for Mutual Benefit.*

Many animals seem to be thoroughly aware of the value of harmonious co-operation, of concerted action, of discipline or order, of obedience to constituted authority, of "the power of numbers," of the principle of union giving strength in measures of defence or offence. They consequently form unions, associations, or organisations for (a) pairing and breeding, (b) migration or travel, (c) hunting or foraging, (d) plundering or war, (e) defence, (f) amusement. Animals, weak or puny individually, become formidable collectively in attack or defence. *Locusts* march regularly in ranks as if trained by army discipline for war. There is no confusion, notwithstanding their vast numbers. This organisation in bands is cited in scripture (Proverbs, xxx., 27) as an illustration of their wisdom. *Dogs* form associations for mutual defence or aggression; in oriental towns (*e.g.* Jerusalem or Constantinople) they organise themselves into "bands." Flocks of American pigeons are also called "bands." Wilson, the American ornithologist, estimated a single band in Indiana as consisting of no less than 2,000,000 birds.§ "Bands" of lemmings are common in arctic and sub-arctic Europe; while in Kamtschatka a similar smaller rodent unites in bands of such size that "a single column will occupy two hours in defiling.|| Eskimo dogs form themselves into "teams." The elephant and reindeer move in "herds;" the wild horse and peccary

* Jesse, p. 392.

† Maudsley: "Genesis of Mind," p. 486.

‡ Maudsley: "Genesis of Mind," p. 481.

§ Milne-Edwards, p. 163.

|| Ibid, p. 159.

of South America, as well as our own swallow, in "troops;" wolves in "packs;" many birds in "flocks;" bees and ants in "swarms," and herring in "shoals." Many of these animals are capable of concerted action for the common good. And in order to this concerted action, they convene assemblies and hold councils, debating and discussing the arrangements most suitable for the common weal. Thus prior to a combination for attack or defence, *Ravens* convene assemblies for a particular *time and place*, and *swallows* hold their councils before they migrate south or north for the season. At such meetings they discuss the policy of flight or assault, calculate the chances of success in war, consult as to the best means of securing a given end; and *decision* having been arrived at, they follow it up by prompt and vigorous *action*. In deliberation and action alike there is exhibited a common deference to the general interest, recognition of and obedience to authority, control over the passions of individuals. Associations of animals are sometimes only *temporary* or for a specific purpose, while in other cases they are *permanent*. Thus the hyæna and wolf combine only when pressed by hunger; swallows for travel; beavers for the construction of their winter dwellings. The *Psittacus infucatus* assembles "in numbers towards evening to bathe and *sport* in some limpid stream."* The stoat and brown rat form combinations for attack, revenge, or the punishment of enemies.

XXI. *Recognition of Conspicuous Superiority,*

whether physical merely, or mental. Most animals that combine for the purposes of mutual benefit appoint *leaders* or commanders, whom they implicitly obey, and whose qualifications for command are generally obvious. Sometimes the sole or main qualification is physical strength, the power of might, the ability of the bravest to maintain his authority by force of tooth, or hoof, or horn, against all competitors. In such a case the leader is frequently self-elected; but he is liable at any time to deposition by a younger, stronger, bolder, more ambitious male of the herd or troop. Where the main qualification is mental ability—generalship implying experience, caution, decision, ingenuity or fertility in resource—election is more generally by universal suffrage or sufferance, and the commander's tenure of office is usually more secure. These "generals" of expeditions sometimes exhibit mental

* Milne-Edwards, p. 174.

qualities of the highest kind. A naval officer, writing in the "Inverness Courier," of January 13, 1870, of the Eskimo dog in Labrador, remarks : The Esquimaux travels over trackless snow dependent for safety and guidance on the leading dog, "which is possessed of wonderful sagacity." He chooses his own course uncontrolled; he is not harnessed to the team, but is free two to three "fathoms" in advance. He never tastes nor requires the whip. The others follow "unhesitatingly where he leads" "Though every object is buried in snow he will pursue the best and nearest course to their destination He will scent the coming storm, and turn to the nearest shelter, while the Esquimaux would be quite at fault; and, heedless of upbraidings or entreaties, will return to where they started from if there is no nearer refuge." Each community of *elephants* has its leader, who is generally the largest and most powerful animal in the herd. He controls the movements of the rest, gives alarm in danger, and "seems to examine and decide for the whole herd as to the safety of proceeding in any particular direction."* Sometimes they are said to follow the oldest pair as leaders; in which case they would appear to recognise the claims of seniority and experience, rather than of physical strength. Again, each troop of *wild horses* has its leader (a stallion), which directs the movements of all the rest, as the elephant does. The others "seem instinctively to move in a kind of concert, so that when they are assailed the stronger animals oppose the enemy and protect the younger and weaker."† Each herd of reindeer does is under command of a large buck, or "haldar" as he is called in Norway.‡ Superior talent finds sure promotion among ravens, the most intelligent birds being recognised as the leaders of the flock.

XXII. *Division of Labour and Subordination of Ranks.*

The importance of the principle of distributing work among the members of large communities—all having in view the general good—is both recognised and acted upon by many animals. Bees have several ranks or grades, which have been differently described by different authors probably as they occur in different genera or species; (a) the royal (king and queen), (b) the military (soldiers), and (c) the

* "Chambers' Encyclopædia," art. *Elephant*.

† *Ibid.*, art. *Horse*.

‡ "Reindeer Hunting," "Chambers' Journal," 1870, p. 827.

artisan (labourers or workers) : or as (a) neutrals or workers, of whom some are wax and honey gatherers, whilst others are nurses ; (b) drones (males) ; and (c) the queen.* Ants also live in colonies—consisting of males, females, and labourers—that are neutral or sterile.† The *Termites* (or white ants) have four classes ; (a) labourers for building, (b) soldiers for fighting, (c) purveyors or foragers for procuring and distributing food, and (d) nurses for the sick or weak, old or young. Thus ants feed each other, the purveyor conveying food to the worker ; others take charge of the building, and act also as navvies, wood cutters, and carpenters ; those which are nurses feed the young with appropriate food, and carry them out to bask in the sun in fine weather. Moreover in their wars they make capture of *slaves*,‡ who are subjected however to a mild rule, though they are compelled to work, or yield their produce, for the benefit of their masters. “Can we,” says Huber, “sufficiently admire the prudence and wisdom these insects display in the establishment of such an institution” as slavery? “We here trace neither servitude nor oppression They live under the same roof in brotherly and sisterly union ;”§ which life, if this account be true, is certainly an improvement upon the same “peculiar institution,” as established by man. Huber asserts, too, that ants use captured *Aphides* as a sort of domesticated milk-kine ; as to which assertion a critic observes—“All this is so incredible, so human-like in conduct, that we believe Huber’s enthusiasm has led him to give a wrong interpretation to a very common phenomenon.”|| Huber’s assertion—or a similar one—is however gravely cited by Milne-Edwards (p. 171), who says : “They attack the *Pucerons*, which, on being pressed by the feet of the ant, give out a drop of sweet liquid, which the ant carries off. But some are not content with this, but carry with them the insect (*Puceron*) to the hillock, and retain them there *as farmers do milch cows!*” Female ants, says Menault, “have no influence at all in the politics of the state, and are quite content with being the mothers of a powerful community ;” a circumstance that commends itself to the consideration of those who advocate woman’s rights and the female franchise ! Among spiders some are trappers or hunters ; others weavers, divers, or aeronauts.

* Milne-Edwards, p. 168.

† Ibid, p. 170.

‡ Ibid, p. 171.

§ Chambers, art. *Ant*, p. 26.|| Chambers, art. *Ant*, p. 27.

XXIII. *Wars*

are conducted by many animals—even the most minute in size—in the most systematic way and on a grand scale. In the ferocity of the conflict, the bravery of the whole army, the strategy of the generals, their success in attack or defence, the results in booty or slaves, these animal wars rival the military contests of man, whether civilised or savage. The exploits of certain predatory ants on the Amazon, says Clayton, “read more like a page of Xenophon or Thucydides” (p. 212). Various ants—especially the black ant—conduct wars, arranging plans or schemes for attack, defence, or plunder, deciding or adjourning expeditions. While some of them are said to bury their dead, others are represented as cannibals devouring the slain, though it does not appear whether, in this latter case, they confine themselves to the enemy’s killed. Most obstinate wars occur between different colonies of ants. They can give *signals*, which immediately “change the route of a whole army: and observers, worthy of every credit, assure us that individual ants have been seen to quit the main body, and . . . return with *reinforcements*.”* Moreover, “Two neighbouring or rival hillocks have been seen to fight for the possession of *Pucerons*, and the conquerors have been seen to carry off their prisoners with the same care that they bestow on their own larvæ.”† Wild horses and other animals conduct marches admirably, marshalling the strongest in front or in the circumference, moving in wedge-like masses, or forming squares or circles. In conducting wars, certain animals make use not only of leaders or chiefs, but of scouts, sentinels, and signals. They subject themselves, or are subjected, to a rigorous military discipline; they submit themselves to command, and recognise the necessity for obedience and subordination. Military discipline in some animals—such as the horse and elephant—is frequently of importance in the military campaigns of man. There could be no cavalry were it not for the docility of the horse—its teachableness and bravery. The force of *discipline* in creating *habit* in the war horse has been singularly illustrated on many a battle field. One of the most recent instances is the following:—After the slaughter at Vionville, near Metz, in France, on 18th August, 1870—that is during the present Franco-Prussian war—“a strange and touching spectacle was

* Milne-Edwards, p. 173.

† Ibid, p 171.

presented." On the evening call being sounded by "the 1st Regiment of Prussian Dragoon Guards, 602 riderless horses answered to the summons; jaded, and in many cases maimed, the noble animals still retained their disciplined habits."* The elephant becomes useful to man in warfare in quite a different way; he can be taught to cut and thrust with a kind of scimitar carried by the trunk. The cruel carnage of human passion has its parallel in some of the lower animals. Such for instance is the *massacre* of the drones by bees;† the deliberate torture of captured animals or slaves; the ferocious punishment of strangers accidentally or intentionally entering an assemblage of their kind.

XXIV. *Migrations* (Temporary or Periodic, and Permanent).

The swallow and quail, and other birds, migrate southward every winter. The salmon, herring, tunny, and other fish have also their migrations. The well-known seasonal migrations of birds, which have hitherto been attributed to *instinct*,‡ are regarded by certain modern authors of the Darwinian school as simply the result of *instruction* transmitted hereditarily from generation to generation. According to Darwin "*Instinct* is the result of the *experience* of the race in opposition to the older theory, that it is unchangeable. Instinct is an ensemble of *habits acquired* during a long period, and fixed by *heredity*."§ Darwin's views are accepted throughout Germany—that country of profound thinkers and reasoners, of patient and painstaking observers; and his opinions, on this subject at least, are infinitely more scientific, his explanation much more probable and satisfactory, than the untenable theories it displaces. Some animals—such as the bee, are constantly "swarming" off—emigrating and founding new *colonies*.|| Among men colonies are regarded as signs and out-growths of *civilisation*. What are they to be considered in other animals?

XXV. *Social Arrangements and Government*.

The social impulses, the family and communal instincts, of the lower animals are developed in a considerable variety of

* The "Illustrated London News," of Novem. 26, 1870, gives a plate relating to the same incident, entitled "Riderless Horses answering the Regimental Call after Battle."

† Milne-Edwards, p. 168.

‡ As by Milne-Edwards, p. 159.

§ Academy, Feby. 12, 1870, p. 133. || Menault, p. 23. Milne-Edwards, p. 170.

practical forms. The principle of *communism*—of equality of rights and duties—is the basis of certain ant societies, *republics and democracies*;* while the *monarchical and despotic* forms of government are illustrated in the horse, reindeer, bee, and other animals. Ants, says Menault (p. 2), have a government, “which is a pure democracy, and seems to realise the political dreams of Plato or those of Sir Thos. More The property belongs equally to all The whole community forms a brotherhood, and no individual is distinguished by aught save ardent love for the public good.” On the other hand the jurisdiction of the “haldar” of a reindeer herd (of does) is monarchical or despotic—much like that of a Turkish Basha over the ladies of his harem. There is an imitation of the same relation of a Sultan to his harem among wild horses, and their mares and foals. Ants are divided into *nations*; beavers separate themselves into *families*; bees form “regular and permanent societies” (Menault), communities, or *colonies*.† Ants also live in colonies; so do the Cape of Good Hope sparrows (*Loxia socia*), which construct their nests under a roof-work common to the whole colony.‡ Birds of passage have their *legislative assemblies*; ants and other warlike animals their *councils of war*. Professor Pumpelly, of Harvard University, Cambridge, Massachusetts, describing animal life in Texas and Arizona, speaks of “the *immense republics*, as they are commonly termed, of prairie dogs.”§

XXVI. *Laws and Punishments.*

Certain animals have regular *systems* of government; with *codes* of laws or rules, and punishments for their infringement. The bee, says Menault (p. 24), “possesses a policy which submits all to *law*, and provides for a crowd of eventualities, which could not have been foreseen.” A parent dog punishes its offspring for theft, errors, stupidity, or laziness;|| the shepherd’s dog punishes sheep that neglect its warnings; and there can be no doubt that much of the experience, aptitude, and intelligence of animals is the fruit of such correction of the young by parents or elders.

* Even Goodsir admits that some animals form “*perfect communities or polities*” (p. 315).

† Milne-Edwards: p. 166.

§ “Across America and Asia,” 1870, p. 3.

‡ Ibid., p. 165.

|| Jesse, p. 33.

XXVII. *Language.**

"The only requirements of language are connected ideas and the faculty of articulation."† The former—connected ideas—many of the lower animals unquestionably possess. Some authors, such as Leroy, go so far as to assert that animals have a spoken language (pp. 73-4); while others content themselves with pointing out that there is much less difference between the language of animals and of man than at first sight may appear. Coudereau, for instance, remarks that "Man acquires the faculty of *speech* by his memory, labour, and imitation; the parrot does no more. From a linguistic stand-point this faculty is in its nature identical in man and animal. Man expresses his ideas by the aid of a language he has made his own. All animals do the same He presents simply, in this respect, a greater development of a faculty common to all social animals." Certain dogs, birds, and other animals have been trained to *speak*, or at least to give distinct utterance to words or sentences. But this must be considered an exceptional triumph of education. Milne-Edwards admits that man is not the only animal that possesses the power of *pronunciation*—that is the *articulation* of voice-sounds. But he is (he says) the only one who attaches meaning to words and their arrangement, and thus possesses the faculty of *speech* (p. 150). In common with man, however, animals possess the *language of action*—of signs, sounds, gesture; and the *language of expression* or look—of the feelings or emotions. By these, or by other means which are less patent to our discrimination, animals undoubtedly communicate to each other, not only their wants or desires, suspicions or fears, but their ideas of all kinds. All the members of a flock or herd thoroughly understand one another (Ex.—dog, horse, cattle, sheep, elephant, camel, ass, mule, cat, goat); and not only so, but man—in the case of the animals which come more immediately under his observation—becomes enabled to interpret the language of animals, and to hold with them sometimes an intimate degree or kind of intercourse. The dog uses the language of the eye, tail, gesture or attitude, and voice. He *looks* his thanks or gratitude, asks permission by looks or licks, exhibits signs of joy or sorrow, of fear, alarm, or expectation;

* There are some remarks on the *Language of Animals* in Combe's *Phrenology*, vol. ii, p. 146.

† Leroy, pp. 73—4.

expresses civility or good humour, satisfaction or discontent. Of the shepherd's dog Jesse says there is "a *philosophic* look about him, which shows thought, patience, energy, and vigilance" (p. 229). The dog is equally capable of expressing blandishment, command, petition, appeal, protest, defiance, agony. By look or gesture he can show unmistakable contempt and disgust. His whine or howl may signify the loss of a master, or a sense of sorrow, distress, pain, or bewilderment. He is capable moreover of a great variety of facial expression. In him, as in the elephant, the very "pathos of expression" may be studied. His gesture-language is analogous to pantomimic action in man. "I am positive," says Sir Walter Scott, "that the communication betwixt the canine species and ourselves might be greatly enlarged." The wild horse signals and understands *signals*, which are virtually telegraph messages, conveying decisions as to flight, battle, or security. He has the power of understanding and communicating ideas—such as terror or alarm, recognition, discovery of water or pasture.* Elephant language—which is intelligible to every member of a herd—includes the war-cry, the note of alarm in danger, the call for assistance, the announcement of the discovery of food supply, or of safety, hunger, good humour. Buffon speaks of its "pathetic expression of sentiment," and of its "glance of intelligence," or "of penetration;" while Menault refers (p. 255) to its looks of gentleness, patience, resignation and attention. The camel expresses its sense of injury—utters its protest thereat—by cries of the most pathetic, or piteous kind, when too heavy a load is placed on its back. Ravens impart and receive suggestions from each other; they consult, discuss subjects bearing on the common weal, and hold "councils of war," and "committees of ways and means." The language of birds is at least partly *acquired*—the result of education. Toussenel specially studied the *Expressions of Emotion* in birds. Their songs are frequently their form of giving expression to the passion of love. They have been assigned partly also to the mere joyful sense of life, or they have been considered the result of emulation. By cries, birds communicate to each other a knowledge of peril or safety—evil or good. Thus it is by a peculiar cry that the swallow calls together its companions for mutual defence.† One bird, therefore, comprehends the acquired ideas of another. The *language of rooks*

* Chambers ; art. *Horse*, p. 28.

† Milne-Edwards : p. 173.

was studied by M. Dupont de Nemours, and was said by him to be composed of twenty-five *words*. He also professed to have *interpreted the song* of the male nightingale; of which he published a translation.* Ants have intercommunication of ideas and intentions; they show mutual recognition and exchange salutations; they have modes of giving thanks or expressing gratitude: their language of affection is illustrated in the caressing or fondling of the young or sick. The bee too has the power of inter-communication—apparently by touch, however, not by sound.† The *Physiognomy of Expression* in animals, and its interpretation—the language of the emotions and passions, appetites or desires—are illustrated by the look of appeal, affection, or love—or of defiance, anger, fear, or sorrow; all these, and many other signs of mental action being duly recognised or understood by men familiar with the habits of animals. All work in common, says Menault (p. 99), *necessitates a mutual understanding*—whether among different individuals of the same species, or between the lower animals and man.

XXVIII. *Education.*

Quite as wonderful a change is sometimes produced in other animals as in man by education or training. Their teachableness,‡ their capacity or aptitude for instruction§, and the results of that instruction, or of the cultivation of their “faculties,” is frequently remarkable. All their mental qualities or attributes are capable of improvement by cultivation; their instincts, senses, emotions, volition, and intellect. There are, however, remarkable differences in the teachability of individuals of the same species. Some animals are very apt to learn the same accomplishments, which others can never be made to acquire. On the one hand there is a *natural aptitude*—the individual learning apparently without effort; and on the other a *natural stupidity*, which no perseverance can overcome. Animal education consists of the influence of

- (a) Experience, or self-instruction.
- (b) Training of the young by parents or elders.
- (c) Association with man, including domestication.
- (d) Training by man.

* Maudsley: “Genesis of Mind,” p. 491. † Milne-Edwards, p. 173.

‡ The words *educability* and *educate-ability*—now frequently used in these days of Educational Reform—are both bad in their construction and ambiguous in their signification. They have no place in the two quarto volumes of Noah Webster.

§ Kirby (p. 173) has some remarks on their capability for instruction.

(a) Unquestionably animals have the important faculty of learning or profiting by their own *experience*; hence the rapid and rash judgments—the imprudent or false action—of youth are gradually corrected by the experience of maturity and age—just as in man. The sense of inconvenience leads, for instance, to *improvement* in the construction of their habitations. Quite recently the celebrated M. Pouchet, of Rouen, has demonstrated the progressive improvement, with experience, in swallow's nest construction, within his own memory and observation, in that city. Both Leroy and Wilson (the American ornithologist), pointed out long ago that there is a marked inferiority in the nests made by young birds,—the improvement in those of older animals being due to experience on the one hand and instruction on the other. Leroy has also shown that the nests of the same species differ as much in their minute details as do human dwellings—though these differences are only recognizable by those who make a special study of birds'-nest construction. Wallace, in his "Contributions to the Theory of Natural Selection," "raises bird-nest-making to the rank of an intelligent art;" and shows how much of human construction is simply imitative, and, therefore, as fairly to be called instinctive as a bird's. As in man, experience leads to correct and prompt judgment and action in perplexity: age and experience give both authority and knowledge. Need, self-interest, is a wonderful sharpener of intellect and will; "*urgent instincts make all animals more or less intelligent.*"*

(b) *Teaching of the young* and inexperienced by the mature, or old and experienced—including the instruction of offspring by parents—is illustrated in the case of many birds—such as the raven, griffon-vulture, and swallow—of the dog and many other animals. Not only various *arts*—such as those of construction [bird-nest-making and the like]—but *morals* are thus taught by old to young animals.

(c) Without any special or direct training, mere *association with man*, in proportion to the intimateness of the association and according to the character of the man, exercises a potent influence, whether for good or evil, on the domesticated animals. Jesse tells us that, in the dog, the *intellectual* faculties are more highly developed than in other animals, partly at least because of its intimate association with man. "The intelligent action of man, working by means of *domestication* on wild natures, will ultimately succeed in ameliorating, reclaiming, and perfecting them."† Domestic-

* "Spectator," November 26, 1870.

† Figuier: "Primitive Man," p. 238.

cation also developes and strengthens the *intellect* in the horse; but, on the other hand, it has been remarked of the horse, that its "sagacious powers" in Europe are "most imperfectly developed." He is "in a state of utter degradation"—associated with human beings "of the very lowest grade:" "in the scale of creation infinitely below the generous creatures they torment."* Hence it would appear that man's influence is capable of developing on the one hand, or of preventing the development on the other, of the best and worst qualities of the animal mind. His influence operates chiefly in two ways: (a) by the force of his *example*; and (b) by reason of his *cruelty*, bad usage, or neglect. "Example, rather than command, *forms* the desired character" in the dog as in man, says Jesse (p. 38); and I have already pointed out the closeness of observation, and the powers of imitation in animals. There can be no doubt, I think, that many at least of the worst features of the animal character—many changes *for the worse* in the disposition and habits of animals—are attributable to the various cruelties of man—his sins toward them both of omission and commission. Thus the so-called ferocity of the mule, ass, horse; the filthiness and obstinacy of the pig; the sullenness and bad temper of the dog; the resentment and revenge of the elephant and camel—have all been attributed by competent authorities to the evil influence of man: another of the many weighty arguments that may be adduced against *cruelty to animals*.

(d) *Direct Instruction by Man* has yielded the most unexpected results, illustrative of the intellectual, moral, and other capacities or aptitudes of the lower animals. There have been "learned" dogs, pigs, ponies; "performing" dogs, goats, horses, elephants, serpents, even fleas—trained to wonderful exhibitions of muscular agility—of knowledge of numbers, letters, words—of human-like behaviour. Thus dogs have been trained to act as butlers, waiters, and boots; to go messages; to fish† or forage for man; to guide and beg for their masters; to take part in theatrical performances; they can be taught military tactics; and man has even been enabled by perseverance in the dog's education to gift him, like the parrot, with *articulate speech*. The Eskimo dog is trained to run in teams and draw sledges like horses; in truth, he is the horse

* A writer in "The Gentleman's Magazine," November, 1835, reviewing Jesse's 'Gleanings of Natural History.'

† Jesse (p. 148) mentions a so-called "Fishing" dog, which fished purely *for its own amusement*—just as man does.

of the arctic regions ; and we have already seen how other dogs learn orthography, reading, card playing and other games, and acquire, or can assume, a demeanour rivalling in its gravity or playfulness that of man. A recent number of the "New York Times"* contains a report, as quaint as interesting, of a visit to an establishment in that city for the *education of dogs* for theatrical purposes. The following details, illustrating the experience and opinions of the "professor," teacher, or trainer, are, I think, worthy of extract and special record.

"No dog is so good as a poodle . . . You would be surprised to know what a difference it makes when I train a puppy from an *intellectual stock*. That poodle's grandfather ran 100 nights . . . in the 'Orphan's Friend ; or, Innocence Avenged,' in the old country ; and his grandson learns 'most anything at one showing . . . That dog would *steal* for me if I told him to . . . It takes a great deal of patience to instruct a dog thoroughly . . . You can't put any fixed price on a 'star' dog" [that is a regular first-class performer such as would 'draw' at a circus]. "I have been offered 800 dollars" (£160) . . . "A good dog—one that could play in the 'Montargis' piece, and had good size, and 'looked the part'—I see was sold in Manchester last summer for £200 . . . That little retriever is just worthless when away from me, and she is a very intelligent dog. 'Dolly ! my slippers, pipe, tobacco, and a match !'" [These orders were given very quickly, and the dog scampered round the room and brought what was wanted, one thing after the other.] . . . "I can train a dog to be a regular *fire-extinguisher*. They scent fire and smoke in a moment. I had a big dog once who could put out any ordinary-sized fire in a moment. He would roll over and over in it *even though it burnt him*, until he put it out . . . That dog knows we are talking about him, and he's pondering on us. Dogs does a deal of *pondering*. That dog's an *inventive* dog, sir, and is capable of striking off for himself a perfectly *original* line of characters ; only, sir, when up to the 'beauties' of his part—hinspired, I may say, regularly hinspired—he *will* drop his tail ! . . . May-be, sir, you don't know much about plays where the dog is the actor . . . To see a dog come in with his tail *down*, like a whipped cur, takes all the 'life' out of the piece. Dog human-nature, notwithstanding any of the arts of man,

* Quoted in the "Edinburgh Evening Courant," Feby. 16, 1871.

will show itself *there* . . . The muscles at the joint of his tail had been clean cut, so that he couldn't drop it or wag it if he tried. *That* ain't true art, and I'm above it. It's the ambition of my life, however, to *succeed in that one point*. I suppose, if I had a very young puppy and trained him up alone—apart from any other dogs—and we neither of us lost our tempers—we might succeed. In the meantime, as you see, I satisfies my craving for *perfection* with short-tailed dogs. Nature and her defects ain't so perceptible in a bob-tailed dog It ain't often," said the painstaking "professor," in conclusion, "I am appreciated!"

The cat, cheetah, seal, otter, eagle, falcon, hawk, owl, and cormorant can be taught to hunt for behoof of and by their human masters—an education or accomplishment that implies wonderful control over natural instincts, passions, or appetites. The monkey, naturally an impatient, mischievous, playful animal, can be made to guide and beg for blind men "with an address and foresight equal to any man."* Birds [Ex. carrier pigeons] can be trained as messengers, and the influence of education is illustrated by the fact that the old are more skilful and trustworthy than the young birds. Canaries have been taught a considerable variety of "tricks"—the exhibition of which has been made a source of profit to their masters. In Persia the falcon is trained to assist in the capture of the wild ass.† The rat can be taught theatricals; and the flea military drill; while many other animals [Ex. horse, ass, carcary, pig, parrot] are also eminently teachable.

There is thus among the lower animals—quite as much as in man—a capacity for mental development, progress, or improvement under *proper* education. But proper education among animals is as yet almost a thing unknown. Hitherto, for the most part, the training of animals has been undertaken by man only for his own selfish ends; the displays of agility or ability in the dog, horse, and other animals have been simply a source, or the source, of income to their masters; or the useful powers or aptitudes of animals have been in other ways applied solely to the necessities or pleasures of man. In these cases, animals have not fallen into the hands of those most capable of educing their finer qualities. Education has been that of fear and penalties—not of love and

* Menault, p. 364.

† Maudsley: "Genesis of Mind," p. 488.

kindness;* it has been too frequently the fruit of a cruel discipline, which, while it might and did develop a wonderful degree of motor or mental cleverness, was little calculated to develop the moral nature—the finer sensibilities—of highly sensitive animals. When the education of animals is entrusted to *proper* hands, and conducted on *proper* principles,—when it is fully recognised as a basis for instruction that they possess both an intellectual and a moral nature capable of improvement—as well as passions, appetites, propensities, or instincts capable of control or direction—that in animals as in man there is “a large amount of *undeveloped mentality*”—what Maudsley speaks of as a *potentiality* for high mental development—we may expect results of which those mentioned in the foregoing catalogue [of the qualities, aptitudes, or accomplishments of animals] are but the feeblest indications—the most trivial illustrations. Their *proper* education and protection is a *duty* man owes imperatively to the lower animals, not only because thereby they will become more useful to him—whether as servitors or friends—but because they have too long suffered the cruellest injustice at his hands; while, moreover, his own position in the scale of life is not, in many respects, superior to theirs! If a dog or horse is not a man, he is at all events, in certain respects, a *brother*,† capable of repaying man for all the affection and labour he may bestow on the training of powers naturally noble and useful.

XXIX. *Hereditary Transmissibility of Acquired Qualities*

is a subject that appears to me deserving of full investigation in reference to the inter-relations of *instinct and reason* in animals. We already know that certain *acquired* qualities or habits are hereditarily transmitted in animals, just as they are in man;‡ and it is equally true that Habit—which

* A consideration of their utter helplessness, and the slightest reflection on their capacity of appreciating such an influence, are calculated surely—

“To teach us to be *kind* :

That nature’s first, last, lesson to mankind ”—(*Young*.)

† Robert Chambers in his verses (*ol. cit.*) on “Work Horses in a Park on Sunday,” urges us, very properly, to

“Make the humble beast to man

A patient, pleading *brother*.”

‡ In man—Bucknill and Tuke point out in their “Manual of Psychological Medicine” (1858)—the effects of *hard work and low diet* are hereditarily transmitted; and similar transmission of similarly produced mental conditions is likely also to occur among other animals.

Combe defines to be "a power of doing a thing acquired by frequently doing it"—as in man, frequently modifies organisation in animals. But much remains to be done in the study of *heredity* in animals; and I know no more promising, attractive, and important field for a student's research. In man it is said proverbially that what is in some persons *intuitive* is in others the fruit of *experience*—a proverb that is based on truth, not only as regards man, but the lower animals also. For what is gained by experience or education in the parent sometimes becomes, by hereditary transmission, *instinctive*, intuitive, innate, primitive or congenital, in the offspring; and we have already seen that hereditary habit, the fruit of experience and instruction of very ancient date, is often mistaken for instinct* [Ex. the Migrations of Birds of Passage; and Bird-nest-construction].

It is impossible, I think, to study even so meagre an outline as I have just given, of the mental qualities or aptitudes of the lower animals, without agreeing with those authorities [such as Leroy, Menault, and Jesse]—who have devoted themselves to the observation of the habits of these animals—that they possess those combinations of mental endowments or acquirements popularly known in and by man as wisdom, sagacity, intelligence, intellect, sense, thought, judgment, prudence, discrimination, shrewdness, knowledge, learning,—illustrations whereof are to be found especially in the dog, horse, elephant, ant and bee. The same sorts of *ideas* appear to pass through the animal, as the human, brain; there is the same kind of arrangement of *arguments* and the same sort of *conclusions*. The assertion of Jesse is probably nearly, if not strictly, correct—that "There is not a faculty of the *human* mind, of which some evident proofs of its existence may not be found in *dogs*" (p. 144). Dr. John Brown goes quite as far when he asserts—"I differ from Professor Ferrier in thinking that the dog has the *reflex ego*, and is a *very knowing* being."†

In his criticisms on the mental endowments of animals, it has hitherto been too customary for man to commit the error of looking for *modes of expression* or exhibition of their faculties of mind similar to his own. In doing so he utterly forgets that there is a "radical difference between their system of knowledge and ours;"‡ and that there are various marked differences in the structure and functions of other animals that cannot fail greatly to modify the forms of expression of

* "Nature," January 5, 1871.

† Chapter on "Our Dogs" in "Horæ subsecivæ," p. 480.

‡ Leroy, p. 55.

their mental qualities as compared with the phenomena of the *human* mind. While he has no difficulty in admitting the existence of bodily species, he forgets that animals are equally capable of division into *mental species*—necessarily differing more or less from each other. Phrenologists make allowance for this difference between man and animals. They recognise the existence of certain “primitive faculties” in one kind of animal and not in another; and the variation of the same primitive faculty in the two sexes of the same species.* It is quite absurd to suppose that no *ideas* exist but *human* ones.

Most important, perhaps, of these structural and functional differences between man and animals is the want in the latter of the power of *articulate speech*. We have seen that under training—mainly as the fruit of attention and imitation—the dog and parrot may be made to utter words, or even phrases. But such a phenomenon is altogether unusual, and scarcely forms an exception to the rule that animals, lower in the scale than man, cannot express their ideas by oral speech similar to his. Most writers are agreed that the possession of the power of speech is a peculiarly human characteristic. Goodsir, for instance, very properly regards speech as an essential of the constitution of man (p. 367). Huxley, with Cuvier, believes that articulate speech is “the grand distinctive character of man” (p. 103); and the importance of its possession is illustrated by his further belief that “a man born *dumb*—notwithstanding his great cerebral mass and his inheritance of strong intellectual instincts—would be capable of few higher intellectual manifestations than an ourang or a chimpanzee, if he were confined to the society of *dumb* associates” (p. 102).

Nearly, if not quite, of equal importance in relation to the mode of expression of the animal mind is the absence, in the lower animals, of hands†—fingers and thumbs. They have no tools save natural ones; they cannot, therefore, *write* or *print*; they are unable to record their ideas or experience; and hence there is no accumulation of knowledge—which in man is the result on the one hand of the power of speech, and on the other of the accomplishment of writing and printing. The important bearing of the want of a hand is illustrated in the opinion long ago expressed by Helvetius, and quoted by Lord Brougham (p. 285), that “if the arm of man had chanced to terminate in the foot of a horse, he would still have been found wandering about as the tenant of the woods;”

* Combe: vol. i., pp 160 and 171.

† *Vide* Sir Chas. Bell on the Human Hand; and Goodsir, p. 366.

and more recently Leroy has expressed his conviction that "had men been without *hands*, all their intelligence would never have led them to the invention of the arts" (p. 109). Modern archæologists aver "that if man had never become acquainted with *metals* he would have remained for ever in his originally savage state;"* in other words had he not had fingers to form and use tools—to manipulate and experiment.

"Having no means," then, says Lord Brougham (p. 288), "of communicating with animals, we are reduced to *our* observation only; and then we naturally draw the inference that because the same things done by ourselves would be known by us to be done from certain mental powers, therefore we ascribe those powers to the animals." Leroy pointed out that animals have, on the one hand, *limited wants*, and, on the other, *limited means* for supplying them; while Menault has shown that their intelligence is in harmony with their organisation, wants, and feelings: they adapt their organs and capacities to their "circumstances" just as thoroughly as *we* do. If we bear in view the wonderful differences of individual, species, genus, family, throughout the animal kingdom—in structure, functions, idiosyncrasy, habit; and the equally remarkable changes produced by external circumstances such as climate, abundance or deficiency of food, the presence or absence of man and so forth, we may be quite disposed to feel and exclaim with sarcastic Pope—

"There's some *peculiar* in each leaf and grain;
Some unmarked fibre or some varying vein.
Shall only man be taken in the gross?
Grant but as *many kinds of mind*† as moss."

The general result of my own investigations is the conviction that certain of the lower animals possess *mind of the same nature as that of man*; that there is no mental attribute peculiarly or characteristically human; and that there is, therefore, no essential mental distinction between man and other animals.‡

* Figuier's "Primitive Man," English Translation, 1870, p. 205.

† If there are not many *kinds* or forms of Mind, there are at least many different forms or modes of its *manifestation or expression*.

‡ I am not to be understood as asserting that there are no mental *differences* between other animals and man. The object of the present paper, however, has been to indicate the general *resemblances*, not the special *differences*, between the respective mental systems of man and lower animals. Before enumerating or discussing the points of *distinction*, I would commend to the reader the consideration of the remarkable *differences* in intellect and morals, that characterise the educated as contrasted with the uneducated person, the civilised with the savage race, the adult with the child, the sane with the insane or idiotic individual, even the male with the female—*among mankind*!

My creed may be fitly expressed by the following quotation from Huxley (p. 109), viz., that "No absolute *structural* line of demarcation wider than that between the animals, which immediately succeed us in the scale, can be drawn between the animal world and ourselves; and I may add the expression of my belief that the attempt to draw a *psychical** distinction is equally futile; and that even the highest faculties of feeling and of intellect begin to germinate in lower forms of life;" "not being able to appreciate or conceive of the distinction between the *psychical* phenomena of a chimpanzee and of a Bosjesman, or of an Aztec with arrested brain growth, as being of a nature so essential as to preclude a comparison between them, or as being other than a *difference of degree*." In other words, just as he speaks of the *structural* "*unity of man with the animal world*"—so may we speak, in the true spirit of modern science, of their *mental unity*.

"Who, after this, will dare gainsay
That *beasts* have *sense* as well as they?

Thus, by examples clear and plain,
We, for these poor creatures claim
Sense to think, reflect and plan,
And in their actions *rival man*;
Their guide not *instinct blind* alone,
But *reason, somewhat like our own*!"

III. *Bibliographical References* (to the best modern Works or Papers that treat of the *Mental Endowments of Animals*).

(*I have designated by an asterisk [*] the works or papers which have been more specially studied in reference to my present inquiry*)

- *1. "The Intelligence and *Perfectibility* of Animals from a Philosophic Point of View : " by Charles George Leroy. 1870.†
- 2. "The *Reasoning Power* in Animals : " by the Rev. J. S. Watson, M.A. 1870.
- 3. "The Nature of Man identical with that of other Animals : " by Julian. 1870.
- *4. "Contributions to the Theory of Natural Selection : " by A. R. Wallace, F.R.S., 1870. Chapter on "*Intellect* of Savages and of Animals compared."
- *5. "Scenes and Studies : " by Captain Clayton. 1870. Chapter on "The possible future existence of the so-called Brute Creation."
- *6. "The Indifference of Animals to Speculative Truth." "Spectator," Nov. 26, 1870.

* Geoffroy St. Hilaire made an attempt to establish a human kingdom, in the Zoological scale, on *psychical* qualities; an effort which Vulpian and Cauvet smiled at as "le dernier terme de l'admiration de l'homme pour l'homme."

† Leroy was one of the Rangers of the Forests of Versailles and Marly, near Paris. He lived in the middle of last century, and wrote, under the pseudonym of "The Naturalist of Nuremberg," a series of letters "On the Perfectibility of Animals." These letters, translated, with certain additional chapters, are what are now published in this country.

7. "De l'Intelligence;" by M. Taine. 1870.
- *8. "Chambers' Miscellany," revised Edition, 1869-70.
 Vol. I. Anecdotes of Dogs.
 " II. " the Horse.
 " IV. " Ants.
 " V. " Spiders.
 " VII. " Elephants.
- *9. "Gulstonian Lectures on the Relations between Body and Mind; and between Mental and other disorders of the Nervous System;" delivered at the Royal College of Physicians, London, in 1870, by Professor Maudsley. "Lancet," Vol. i. for 1870. Subsequently published separately under the title "Body and Mind."
10. "Bible Animals;" by the Rev. J. G. Wood, F.L.S. 1869. Also the previously published "History of Mammalia," by same author.
- *11. "The Intelligence of Animals;" by M. Menault: translated from the French, 1869.
- *12. "Anatomical Memoirs" of the late Professor Goodsir. 1868. Chapters on "The Nature of *Animality*" (Vol. 1, p. 211): on "Life and Organization," with long and important Note on "Psychological Science," (p. 307); and on the "Essence of *Humanity*."
- *13. Chambers' Encyclopædia, 1860-8. Articles on Instinct, Elephant, Camel, Horse, Dog, Bee, Ant, Cat.
- *14. "On Intelligence and its Relation to Instinct;" by M. Coudereau. Translated in "Anthropological Review," 1868. (Vol. vi.)
- *15. "Anecdotes of Dogs," by Jesse. 1867.
- *16. "The Relation of Man to the Inferior forms of Animal Life;" by Chas. S. Wake, "Anthropological Review," 1863, (Vol. i. p. 366).
- *17. "Difference between Man and the Lower Animals;" by Theodor Bischoff. Translated in "Anthropological Review," 1863, (Vol. i, p. 54).
- *18. "Evidence as to Man's Place in Nature:"† by Professor Huxley. 1863. Section II. on "The Relations of Man to the Lower Animals."
- *19. "The Genesis of Mind,"‡ by Professor Maudsley: "Journal of Mental Science" for January and April, 1862. [Nos. 40 and 41. Vols. vii. and viii.]
- *20. *Horæ Subsecivæ*," by Dr. John Brown. 1861. 1st Series, story of "Rab and his Friends;" 2nd Series, chapter on "Our Dogs."
- *21. "Dialogues on Instinct,"§ by the late Lord Brougham. Vol. VI. of his General Works, 1856. Chapters on "Animal Intelligence."
- *22. "Manual of Zoology," by M. Milne-Edwards: adopted by the Council of Public Instruction in France; English translation by Dr. Knox, 1856; chapter on "Intelligence and Instinct," p. 151; and section on the "Faculties of the *Understanding* in Animals," p. 172.
- *23. "System of Phrenology," by the late George Combe, 5th ed., 1853. Chapter on *Comparative Phrenology*," (Vol. ii, p. 382.)

† Has already reached three editions.

‡ Not until *after* my present Paper was sent to press—not, therefore, till my own inquiry was concluded—was my attention drawn to this important contribution to Comparative Psychology, by Professor Maudsley. From a somewhat different point of view, pursuing a perfectly independent line of research, he had arrived at conclusions that substantially agree with my own. His paper contains a number of interesting illustrative anecdotes: it enters into a comparison of the mental condition of the lower animals with that of children, savages, idiots, and other classes of the insane or uneducated; and it contains so much matter of a most suggestive kind that I would strongly recommend the student carefully to peruse his essay in connection with my own. The fact that so accomplished a psychologist should have arrived, from an independent course of inquiry, at similar results, gives me greater confidence in urging the conclusions embodied in my present essay on the attention of all students of the wide and perplexing domain of mind: not as dogmatically enforcing their acceptance, but simply as pleading for due consideration in the form of *further inquiry*.

§ Of this admirable work there are several editions.

- *24. Bridgewater Treatise. on the "History, Habits, and Instincts" of Animals: by the Rev. Wm. Kirby; edited by Professor Rymer Jones.† 1853. Chapter on "Instinct" in general, (Vol. ii, p. 162.)
- 25. "Psychological Inquiries," by the late Sir Benj. Brodie. 1854.
- 26. "Insect Architecture," edited by 'has Knight. 1831.
- *27. "Introduction to the Modern Classification of Insects," by J. O. Westwood, F.L.S. 2 Vols. 1840. Sections on the Habits of Bees, Vol. ii, p. 280; Ants, Vol. ii, p. 221; Wasps, Vol. ii, p. 245.
- 28. "History of British Quadrupeds," by Professor Bell. 1837.
- *29. "Canine Pathology," by the late Professor Blaine. 1817. Introductory chapter on the "*Moral Qualities of the Dog.*"
- 30. "Enquiry into the Nature, Order, and *Government* of Bees," by Thorley. 1744.

The following I cannot arrange among the foregoing by reason of my ignorance of their dates of publication:—

- 31. "Topics of the Day," by Hingeston. Chapter on the "Cerebral Functions of Animals."
- 32. "Biographical Sketches of the Horse," by the late Capt. Thos. Brown.
- 33. "Gleanings of Natural History," by Jesse.
- 34. "Records of Animal Sagacity and Character;" and also "Dogs and their Doings;" both by the Rev. F. O. Morris.
- 35. "The *Education* of the Dog," by M. de Tarade.
- 36. "Animal Sagacity," by Mrs. S. C. Hall.
- 37. "*Humanity* of Brutes," by Youatt.
- 38. "Clever Dogs, Horses, and other Animals," by Shirley Hibberd.
- 39. "Cassell's Book of Birds."
- 40. "Illustrations of Instinct," by Crouch.
- 41. "On the *Affections* of Animals," by Oscar Honoré.
- 42. "Philosophy of Natural History," by Smellie.
- 43. "Sur les Mœurs des Fourmis indigènes," by the two Hubers; abounding in illustrations of *Reason*.
- 44. "Zoonomia," by Dr. Darwin. Section on *Instinct*.
- 45. "Instinct and Reason," by Alfred Smee, F.R.S.
- 46. "Treatise on Human and Comparative Phrenology," by Dr. Vimont. Includes a chapter on the "Cranioscopy of Animals."

There are, moreover, a number of comparatively old—certain very old—books in which the student will find many interesting references to the habits of animals, or to the puzzling relations of Instinct to Reason. Thus the Bible contains many illustrations of the mental peculiarities, or of the habits, of the locust, ant, spider, cony, lion, goat, greyhound, horse, ass, eagle, and other animals (*e.g.*, in Job xxxix and xli; Proverbs xxx, 24-31; Joel i, ii. 2-10).‡ Among ancient writers, Plato, Helvetius, and Plutarch, and among more modern authorities, Bacon, Buffon, Montaigne, Locke, Berkeley, Huber, may be quoted as having directed some attention to a problem which perhaps yet remains to be satisfactorily solved—the determination of the *Nature of Mind in the Lower Animals*.

† There are also several editions of this, as of the other excellent "Bridgewater Treatises."

‡ See also Bib. Ref. No. 10 ("Bible Animals.")

An Analysis of the Post-Mortem Appearances in 235 Insane Persons. By JAMES C. HOWDEN, M.D., Edin., Medical Superintendent of the Royal Lunatic Asylum, Montrose.

ANYONE who has attempted to work up statistical facts from a Pathological Record must have felt how much time and trouble were wasted in wading through case after case which had no connection whatever with the subject in hand.

To obviate this evil, and to make the facts recorded more available for further research, it occurred to me that an index of the pathological appearances would be of great value. The index, a summary of which is appended to this paper, has no pretension to be complete, or to be generally applicable, but is simply what has been found sufficient to index the lesions registered in the Pathological Record of the Montrose Asylum.* I have purposely excluded microscopic and other appearances, about which there might be room for differences of opinion. In referring to this summary, I shall not attempt to prove any connection between the lesion and the mental symptoms during life.

It is not an easy matter to draw the line of distinction between a normal brain and an abnormal one. Where, for instance, is the line between disease and health in opacity of the arachnoid? We find it passing from the barest perceptible trace over the vessels in the pia mater to the conversion of the membrane into a thick leathery cap over the brain. So with fluid in the pia mater, injection of the vessels, fluid in the ventricles, and other appearances. Every observer will probably form his own estimate of these, and, therefore, it is impossible to be sure that in comparing the observations of any two men you are actually comparing the same things. In my index I have excluded from opaque arachnoids such cases in which it is noted "Arachnoid is slightly opaque," or "Opacity along the course of the vessels," and retained only those in which it is said to have been "opaque," or "very opaque." In the case of fluid in the lateral ventricles, I fixed the limit of normality at two drachms.

So far as there were no unusual appearances recorded, it

* I have to acknowledge the great aid I have received in compiling the index from Mr. W. G. Balfour, Assistant-Medical Officer.

will be observed that of the 235 brains examined, 46 were perfectly normal. Of the remaining 189, the calvarium was altered in 22 cases; in one of these the bone had become absorbed over a scrofulous tumour attached to the dura mater, and the temporal bone was perforated by a hole capable of admitting the point of the finger. This patient—a woman—died from general tuberculosis, which manifested itself in the thorax, abdomen, and joints, as well as in the cranium. In 28 cases the dura mater is recorded to have been abnormal, the most important lesions being tumours attached to the membrane and pressing on the cerebral hemispheres. There is, I think, room for doubting whether tubercle and cancer deposits ever originate in the actual nerve substance of the brain.*

The majority of the tumours I have seen in the Royal Edinburgh and Montrose Asylums appeared to have originated in the membranes covering the brain, and to have extended thence into the nerve substance, surrounded in some instances by a distinct membranous sac suspended from the pia mater. In other cases they seemed to have sprung from the membranes or vascular parts of the ventricular spaces. Even where cerebral tumours appear to be isolated by the nerve substance, it is not improbable that they have originated with the vascular network which permeates it.†

The extent and manner in which the intellect is affected by cranial tumours depends altogether on their position. Central tumours of large size may co-exist with an almost unimpaired mind, but whenever they involve or press on the convolutions, the patient presents symptoms of mental alienation.‡

Passing to the arachnoid, I find that it was abnormal in 153 instances; decided opacity is recorded in 52 cases, serous effusion in 62, crystalline granulations in 17, and in

* Rokitsky, speaking of infiltrated cancer deposits, says—"These advance from the brain to the membrane, and through them to the cranium." (*Pathological Anatomy*, vol. iii., p. 431.)

† Dr. Clouston says "Nerve-tissue seems to be almost exempt from tubercular deposition, for of the eight cases (recorded in the *Pathological Record* of the Royal Edinburgh Asylum) there were only two in which the tubercular deposition had not evidently commenced in the membranes." (*Journal of Mental Science*, April, 1863.)

‡ Dr. J. W. Ogle, referring to ten cases examined in St. George's Hospital, says—"I would observe on the exemption from anything like arachnitis in connection with the various growths—in no case was there any such complication attendant. Neither was there during life anything of the nature of mental imbecility, or any symptom of the various phases of insanity." (*Journal of Mental Science*, July 1864, p. 229.) In Dr. Ogle's cases the tumours were seated in the central parts of the brain, and did not involve the convolutions.

21 there was either effused blood, adventitious membrane, or hæmorrhagic cyst in the sac.

Hæmorrhage into the arachnoid sac seems in most cases to take place very gradually, and as the blood spreads slowly over the whole surface of the brain there are no acute symptoms accompanying it. Adventitious membranes form often in the course of general paresis; the patient becomes demented, and if he lives long enough there is every probability that the membrane splits and allows the formation of limited hæmorrhagic cysts, which give rise to distinct convulsive and paralytic symptoms. In one case I had reason to think that the patient died from a sudden effusion of blood into one of these cysts. In another instance the cysts were of such a size that it was found that the shrinkage of the brain was no less than 18 oz.; that is, a cast of the intracranial cavity displaced 54 ounces of water, while the brain with its arachnoid only displaced 36 oz. Allowance, however, must be made for the fluid in the pia mater and ventricles, the latter being estimated at 2 oz.

The lesions of the pia mater amounted to 144, and consisted of marked injection of the vessels in 15 cases, œdema in 33, local bullæ of fluid in 4, recent sanguineous effusion in 11, brown gelatinous deposits (old hæmorrhages) in 9, a tumour in 1, and adhesion to the grey matter of cortex in 31.

Very marked injection of the membranes is often met with in patients dying maniacal, in the recent stages of general paresis or after severe epileptic convulsions.

Hæmorrhagic effusions in the pia mater are not unfrequent in epileptics; those I have met with are of old standing, and had assumed the character of rusty gelatinous deposits.*

The adhesion of the grey matter of the cortex, which seems to be the result of the formation of a plastic exudation around the minute blood vessels, is well known to be a common lesion in the advanced stages of general paresis; it is, however, frequently met with in cases of simple insanity. An examination of the pia mater under the microscope in these cases generally reveals granules or crystals of hæmatoïdsin scattered through it, and the capillaries in the grey matter are often coated with granular matter.

* My experience does not corroborate Dr. Reynolds's statement that "although the epileptic convulsions are not rarely followed by profound coma, and a general appearance of apoplexy, it is exceedingly rare to find that actual cerebral hæmorrhage has occurred." (Reynolds on Epilepsy, p. 225.)

Marked injection of vessels of the brain is noted in only 12 cases, but probably in many more this condition has not been recorded.

Atheroma of the arteries of the base is recorded in 39 instances.

Atheroma of the cerebral arteries, and granular deposits round the smaller vessels in the grey substance of the hemispheres are probably of much more frequent occurrence in lunatics than in sane persons of the same age, but we are not at present in a position to say how far the insanity is the effect or the cause of these changes; it is worthy of note that the vessels of the cerebellum are much less frequently altered than those of the cerebrum.

Of the changes in the brain substance proper, the first to be noted is the marked difference in size and weight of the two sides of the cerebrum. Five instances of this condition are noted: in all of them one hemisphere was shrivelled up while the other was hypertrophied and more or less affected with white softening. The difference in weight of the hemispheres in four of these was as follows:—

	Right.	Left.
1.	27 $\frac{1}{2}$ oz.	23 $\frac{3}{4}$ oz.
2.	22	18 $\frac{1}{2}$
3.	24 $\frac{3}{4}$	20 $\frac{1}{2}$
4.	26	15

The most common change in the white brain substance is œdema and diminution of nerve tissue; it is noted in 44 instances. In 6 cases there was marked sclerosis, in 6 there was white or yellow softening, in 9 cases there was excessive atrophy. In one of these, a man 6 feet in height, and with a well-proportioned cranium, the brain weighed only 40 oz.; the vessels in the grey substance were surrounded by oily or granular matter; the connective tissue was decreased, and the nerve cells had a remarkably swollen œdematous aspect. The height of the body and weight of the encephalon in these 9 cases is as follows:—

MEN.		WOMEN.	
Height.	Weight of Brain.	Height.	Weight of Brain.
6 feet	40 ozs.	5ft. 1in.	38 $\frac{1}{2}$ ozs.
— ?	42 $\frac{1}{2}$ „	4ft. 11in.	40 „
5ft. 7in.	34 „	5ft.	31 „
		— ?	42 $\frac{3}{4}$ „
		5ft. 1in.	43 $\frac{1}{2}$ „
		5ft. 3in.	41 „

Of the recent effusions of blood into the brain, one occurs in the substance of the grey matter of the convolutions, three in the medullary white substance of the cerebral hemispheres, eight in the optic thalamus or corpus striatum, and one in the cerebellum ; white reddish gelatinous softenings (or old effusions) were found in nine cases in the cortical substance, and nine in the corpus striatum or optic thalamus.

In sixty-four instances well-marked crystalline granulations were found on the lining membrane of the ventricles of the brain, and serous fluid, varying in quantity from ziii to many ounces, in these cavities in 93 cases.

In the present state of our knowledge little can be said of the connection between the mental phenomena presented by the insane during life, and the pathological appearances observed in the brain after death.

The structural changes of the nerve-cells observable in chronic cases of insanity, or in those complicated with paralytic symptoms, are probably due to a continuance of functional derangement of the circulatory or nutritive processes in the brain, which at the same time produces the insanity.

If mania and melancholia were the *result* of altered structure, they would be incurable ; and we can only suppose that they are induced by certain unknown conditions of the distribution of the fluids within the cranium affecting the pressure on certain portions of the brain. The symptoms of insanity can be temporarily produced by alcohol and by various drugs, but no one would infer that these poisons altered the nerve structure. Again, a person dreaming during sleep is, intellectually, as irrational as a maniac ; yet dreaming can scarcely be considered morbid, and certainly we would look in vain for structural change in the dreamer's brain.

Insanity is, perhaps, always the result of this functional disturbance, for not only is it so in simple insanity, but even in insanity complicated by distinct pathological conditions, as by tumours, extravasations of blood, exudation of serum, formation of false membranes, or the changes noticed in general paresis ; the mental derangement in the first instance, is caused by pressure on, or irritation of, the grey substance. While, however, it is with the brain as with other organs, that disordered function precedes altered structure, it is not the less important to study these morbid changes which in their turn unfit the brain for healthy action, and produce in the young and otherwise healthy a mental

condition similar to that of extreme old age. Œdema of the brain, the pia mater, and the various cavities in early or middle life means disease, while in old age it is the normal result of long-continued functional activity. So with other changes; in old age the arteries become atheromatous, and the minute vessels and cells of the grey substance coated with granular matter as a normal or at least natural condition; but these conditions must be looked on as none the less abnormal when met with in early life and associated with perverted function.

If insanity does not depend on structural disease of the brain, it is the more necessary that we should examine and carefully study the condition of all the other organs of the body, and trace the connection, if there be any, between their morbid changes and the origin, character, and termination of the mental alienation. I shall only at present simply refer to one or two points of interest in connection with the lesions recorded in the table.

Phthisis, one of the most frequent of the diseases of the insane, leaves its traces in a large per centage of cases.

The per centage in which tubercle or cheesy matter was found in the 235 cases was as follows:—In males, right lung, 27 per cent.; left lung, 24 per cent. In females, the right lung, 37 per cent.; the left, 43 per cent. of the total cases.*

Pneumonic hepatization was found in 19 instances in the right lung and in 13 in the left, and 2 right lungs and 3 left were gangrenous. Cancer of the lung was found in only one case. Changes in the heart and pericardium were of frequent occurrence. Thus the pericardial surfaces were adherent in 7 cases, the membrane presented milky opacity in 12, there was fluid and recent lymph in 24, the valves were diseased in 56. Cancer of the stomach was noticed in 3 cases, of the peritoneum in 2, of the liver in 1, of the mesenteric glands in 1, of the prostate in 1, of the uterus in 2. Cancerous growths in the internal organs give rise more frequently to illusions of sensation than any other disease. When an insane person refers internal pain to the presence of a serpent, or some other beast, or the Devil, there is reason to suspect cancer.

In one of the cases of cancer of the stomach the upper wall was found deficient in a patch of about 2 inches in

* In Dr. Clouston's cases the per centages were respectively 44, 47, 65, and 65. (Op. Cit., p. 7.)

diameter, and the edges of the opening were firmly adherent to the under surface of the left lobe of the liver, which thus closed up the pouch of the stomach. The man was an epileptic, and during life suffered great pain, and had very severe attacks of hæmoptysis. In another case, that of a demented woman, a large fungoid tumour was found at the lower left aspect of the stomach, and a free communication existed through it to the descending colon: the stomach contained fœculent matter. During her last illness any food taken either passed directly out at the rectum or was rejected by the mouth along with fœces.

The liver is recorded as fatty in 91 cases, as waxy in 8, and as having a nutmeg aspect in 21. These numbers seem to be large out of 236. The fatty liver is of course mostly found in phthisical cases. In a Shetland girl several examples of the *Cysticercus cellulosus* were found in the liver. During life she was too demented to give expression to her sensations.

Biliary calculi were found in two men and 17 women. This disproportion in the sexes would point to the supposition that sedentary habits have to do with the formation of these bodies, and this is further supported by the fact that when the old and new asylums at Montrose were both in operation, gall stones were found most commonly in patients who had lived in the old asylum, where the means of exercise and recreation were much more limited. In one case the gall bladder was obliterated by a tumour of a dense horny and calcareous nature. The chief lesions of the kidneys recorded are fatty degeneration in 55,* cysts in 31 instances. In one case a very remarkable condition was found: the left kidney was very large weighing $9\frac{1}{2}$ ozs., but apparently normal; while the right, which at first seemed wanting, was found to be represented by a body rather less than a garden bean; the ureter on the left side was large, and with that on the right, was perforated about an inch above the bladder, and then gradually passed into a fibrous thread. The suprarenal capsule on the right side was of normal size and appearance.

Of the remaining abnormalities, there are two instances of the occurrence of urinary calculi, seven of fibrous tumours of the uterus, and four of similar bodies in the ovaries, and four ovarian cysts.

* The number of fatty kidneys is perhaps too large, and may include some entered "apparently fatty," but that it would be considerable may be judged from the fact that during three years twelve patients were admitted with albuminuria.

In conclusion, I have only to draw attention to the annexed summary of the index. The index might include much more, and may be very imperfect, but it seems to me that some scheme of this kind would render the pathological records of our asylums and general hospitals of much more use than they are at present.

SUMMARY OF INDEX

OF THE PRINCIPAL LESIONS FOUND ON POST MORTEM EXAMINATION OF 235
INSANE PERSONS—108 MEN, 127 WOMEN.

HEAD.		M.	F.	TOT.
<i>Calvarium</i>				
"	abnormally thickened	11	6	17
"	" thin	1	2	3
"	Caries and perforation of temporal bone .	0	1	1
<i>Membranes</i>				
"	<i>Dura Mater</i> very firmly adherent to calvarium	15	5	20
"	" abnormally thickened	3	1	4
"	" ossification of	0	0	0
"	" tumours attached to	2	2	4
"	<i>Arachnoid</i> effusion of blood into sac	2	5	7
"	" false membrane in	4	8	12
"	" sanguineous cysts in	2	0	2
"	" pus in	0	0	0
"	" effusion of serous fluid into	27	35	62
"	" crystalline granulations on	12	5	17
"	" opacity of	35	17	52
"	" adhesions of surfaces of	1	0	1
"	<i>Pia Mater</i> marked injection of vessels of	7	8	15
"	" oedema of	17	16	33
"	" local bullæ of fluid in	3	1	4
"	" sanguineous effusion into	3	8	11
"	" pus in	0	0	0
"	" tumours attached to	0	1	1
"	" brown gelatinous deposit in	5	4	9
"	" adhesion of to surface of grey matter	23	8	31
<i>Blood Vessels</i>				
"	Arteries at base atheromatous	19	20	39
"	Aneurismal dilation of arteries of brain .	1	0	1
"	Injection of in brain	5	5	12
<i>Grey Substance</i>				
"	Flattening of convolutions	2	3	5
"	Gelatinous softening of	5	4	9
"	Effusion of blood into	0	1	1
<i>White Substance</i>				
"	Induration of	4	2	6
"	Oedema of	25	19	44
"	White softening of	4	2	6
"	Effusion of blood into	0	3	3
"	Excessive shrinking of	3	6	9
"	Marked injection of vessels of	2	2	4
"	Cysts in	1	0	1

HEAD—(continued).

	M.	F.	TOT.
<i>Optic Thalamus & Corpus Striatum</i>			
" Sanguineous effusion into	4	4	8
" Pink gelatinous softening of	7	2	9
" Tumours in	0	1	1
" Cyst in	1	0	1
" Cicatrix in	0	1	1
<i>Cerebellum</i>			
" Adhesion of membranes to surface of	2	0	2
" Effusion of blood into Pia Mater of	0	4	4
" " " substance of	1	0	1
<i>Other Parts of Brain.</i>			
<i>Ventricles</i>			
" Excessive serous fluid in (above 3ij.)	47	46	93
" Sanguineous effusion into	2	6	8
" Crystalline granulations on lining membrane of	40	24	64
" Septum lucidum tubercle in	1	0	1
<i>Choroid Plexus</i>			
" Cysts in	0	0	0
" Tumours in	0	0	0
" Earthy deposit in	1	0	1
Marked difference of size and weight of the two Cerebral hemispheres	4	2	6
Brains apparently normal	17	29	46

THORAX.

<i>Ribs</i>			
" fracture of, or callus on	1	3	4
" ossification of, cartilages of	4	3	7
<i>Pleura</i>			
" effusion of serous fluid into	12	8	20
" " " sanguineous "	0	0	0
" purulent matter in	3	3	6
" recent lymph in	4	4	8
" adhesion of (A. Universal)			
Right Side)	16	15	31
Left Side)	14	10	24
" " " (B. Partial)			
Right Side)	21	39	60
Left Side)	23	38	61
" tubercle on	2	0	2
<i>Lungs</i>			
" tubercular, or cheesy deposit in right	30	48	78
" " " " " in left	27	55	82
" cavities in right	14	21	35
" " in left	14	28	42
" cancer in right	1	0	1
" " in left	0	0	0
" congestion of right	15	8	23
" " " left	14	8	22
" carnification of right	2	2	4
" " " left	3	2	5
" hepatization of right	11	8	19
" " " left	7	6	13
" gangrene of right	2	0	2
" " " left	3	0	3

THORAX—(continued).

	M.	F.	TOT.
<i>Lungs</i>			
„ emphysematous dilatation of pulmonary sub- stance of right	1	6	7
„ emphysematous do. do. of left	1	7	8
„ abscess (non-tubercular) right	1	0	1
„ do. do. left	0	1	1
<i>Pericardium</i>			
„ adhesion of surfaces of	4	3	7
„ marked opacity of	5	7	12
„ fluid in, serous	23	27	50
„ „ „ sanguineous	2	4	6
„ lymph in	13	11	24
<i>Heart</i>			
„ fatty degeneration of	0	4	4
„ valves, abnormal	19	41	60
<i>Aorta</i>			
„ atheroma, at commencement of	46	58	104
<i>Coronary Arteries</i>			
„ atheroma of	5	0	5

ABDOMEN.

<i>Peritoneum</i>			
„ Fluid in—serous	3	9	12
„ „ „ —purulent	1	1	2
„ „ „ —sanguineous	0	0	0
„ tubercle on	2	2	4
„ cancer on	1	1	2
<i>Stomach</i>			
„ cancer of	1	3	4
„ perforation of	2	2	4
„ absence of part of wall of, and adhesion to liver	1	0	1
<i>Liver</i>			
„ fatty	35	56	91
„ waxy	6	2	8
„ nutmeg	9	12	21
„ hypertrophy of	0	3	3
„ tubercle of	0	1	1
„ cancer of	1	0	1
„ tumours in	0	1	1
„ cysts in	0	1	1
„ cystocerci in	0	1	1
„ earthy deposits in	2	0	2
„ abscess in	0	1	1
„ congestion of	9	0	9
<i>Gall Bladder</i>			
„ gall stones in	2	17	19
„ obliteration of	0	1	1
<i>Spleen</i>			
„ thickening of capsule of	1	0	1
„ puckering „ „	1	0	1
„ cysts in	0	1	1
„ waxy degeneration of	0	1	1
„ earthy deposit in	1	0	1
„ tubercle in	1	0	1
<i>Pancreas</i>			
„ hypertrophy of	1	0	1

ABDOMEN—(continued)—					M.	F.	TOT.
<i>Kidneys</i>							
"	fatty degeneration of	.	.	.	16	39	55
"	waxy	"	.	.	0	2	2
"	calculi encysted in	.	.	.	1	1	2
"	cysts in	.	.	.	16	15	31
"	abscess of	.	.	.	1	2	3
"	tubercle in	.	.	.	1	0	1
"	atrophy of	.	.	.	2	0	2
"	hypertrophy of	.	.	.	1	0	1
<i>Mesenteric Glands</i>							
"	"	indurated	.	.	5	6	11
"	"	cancer of	.	.	1	0	1
<i>Intestines</i>							
"	ulceration of ileum	.	.	.	5	13	18
"	"	"	ascending colon	.	7	20	27
"	"	"	transverse	"	3	13	16
"	"	"	descending	"	3	10	13
"	strangulation of	.	.	.	1	3	4
<i>Urinary Bladder</i>							
"	"	calculi in	.	.	2	0	2
<i>Prostate Gland</i>							
"	"	cancer of	.	.	1	0	1
<i>Uterus and Ovaries.</i>							
<i>Uterus</i>							
"	fibrous tumour in	.	.	.	0	7	7
"	cancer of	.	.	.	0	2	2
"	earthly tumour in	.	.	.	0	1	1
<i>Broad Ligament</i>							
"	cysts in	.	.	.	0	3	3
"	tumours in	.	.	.	0	3	3
<i>Ovaries</i>							
"	tumours in	.	.	.	0	4	4
"	cysts in	.	.	.	0	4	4

How and What we perceive by means of Touch, and the Muscular Sense, on the Basis of Sir William Hamilton's Researches.
By the REV. W. G. DAVIES, B.D., Chaplain of the Joint Counties' Asylum, Abergavenny.

It was a feature peculiar to the late Sir W. Hamilton's character to avoid writing on any subject, with a view to publicity, until he had mastered everything extant which had previously been written upon it. It is said that when Hamilton, on its first appearance, read Whately's *Rhetoric*, he accused the author of plagiarism. A mutual friend suggested that Whately most probably had never even heard of the sources supposed to have been laid under contribution. Then why, asked Hamilton, did he presume to write on the

subject at all? Now it is just because Hamilton himself was so punctilious in this respect that his researches are of great value to the psychologist. The investigator who masters these, and builds on them, may feel confident that he does not break with the past, but that his conclusions legitimately spring, as all such conclusions should do, positively, out of the capital of knowledge which our forefathers have amassed, and negatively, out of the errors they have committed.

Hamilton having gone further into the subject of which this paper treats than most philosophers, having deeply studied both the history and the physiology of the same, it appears to us that we cannot do better, by way of elucidating it, than to enter into his views, and build on the basis which he left. He came to the conclusion that we have no intuitive or primary knowledge of matter, as the extended, except what we possess of it in our own organism.

Overlooking other qualities of matter, let us simply regard it as having extension and solidity. How are these qualities perceived?

Hamilton's account of the perception of the *extended* is as follows:—"The primary qualities are perceived as *in* our organism." "Thus a perception of the primary qualities does not originally and in itself reveal to us the existence and qualitative existence of *anything beyond* the organism apprehended by us as extended, figured, divided, &c." As to how the primary qualities are perceived *in* our organism, he declares that "Sensation proper is the *conditio sine qua non* of a perception proper of the primary qualities. For we are only aware of the existence of our organism in being sentient of it as thus or thus affected; and are only aware of it being the subject of extension, figure, division, motion, &c.," (the primary qualities) "in being percipient of its affections as like or unlike, and as out of, or locally external to each other."* Sensation, in fact, as we shall show further on, amounts to the same thing as the object of sensation; and perception is that which discriminates the qualities of such objects.

Hamilton then, be it observed, concludes that we have no other immediate knowledge of the primary qualities than that which is involved in our sensations as locally external to each other. So far, then, as the extended is concerned, we have no direct knowledge of the external world. Hamilton teaches

* Hamilton's Reid Note D* (24) (25) (15).

that this is cognised as a *force resisting* our locomotive energy. "The existence of an extra-organic world," he says, "is apprehended *not* in a perception of the primary qualities, but in a perception of the quasi-primary phasis of the secundo-primary; that is, in the consciousness that our locomotive energy is resisted, and not resisted by aught in our organism itself. For in the consciousness of being thus resisted is involved, as a correlative, the consciousness of a resisting something external to our organism. Both are, therefore, conjunctly apprehended."* It is here necessary to remind the reader, that Hamilton repeatedly states, we are not authorised to assert the actual existence of a *non-ego*, unless we have an immediate or presentative knowledge, as opposed to a blind belief, of it. The immediate consciousness which we experience of the external world is of the world in correlation with our organism as a resisting something. Of the related, Hamilton remarks—"The conception of the one term of a relation necessarily implies that of the other; it being of the very nature of a relative to be thinkable only through the conjunct thought of its correlative. For a relation is, in truth, a thought one and indivisible; and while the thinking a relation necessarily involves the thought of its two terms, so is it, with equal necessity, itself involved in the thought of either."†

When Hamilton states, therefore, that the extra-organic world is known in correlation to our organism, he clearly means that we know it immediately and in itself, for he declares that "when I am conscious of the exertion of an enorganic volition to move, and aware that the muscles are obedient to my will, but at the same time aware that my limb is arrested in its motion by some external impediment,—in this I cannot be conscious of myself as the *relative* without at the same time being conscious, being immediately perceptive, of a not-self as the resisting *correlative*."‡

Let us now ask a few questions on the point under examination, and endeavour to ascertain the reply which Hamilton yields to them. How far does our immediate knowledge of the extra-organic world extend? We know it simply as a resisting something external to ourselves. Have we no immediate knowledge of this resisting something as possessed of the primary qualities? No, for "the primary qualities are perceived as *in* our organism." "All perception is a sen-

* Note D* (28),

† Hamilton's Reid Note D***, p. 911.

‡ Hamilton's Reid, p. 866, foot note.

sitive cognition, it therefore apprehends the existence of no objects out of its organism, or not in immediate correlation to its organism, &c.* How, then, do we come to impute primary qualities to the resisting something which we apprehend as extra-organic? "The primary qualities of things external to our organism we do not perceive, *i.e. immediately know*. For these we learn to *infer* from the affections which we come to find that they determine in our organs;—affections which, yielding us a perception of organic extension, we at length discover, by observation and induction, to *imply* a corresponding extension in the extra-organic agents."† Is the external world of the common sense philosophy, then, simply the resisting something, or is it also that which we infer from the original data of consciousness? Before answering this question, we would state—Hamilton lays down as a precaution "That we admit nothing not either an original datum of consciousness, or the legitimate consequence of such a datum."‡ In conformity with this maxim, he criticises certain psychologists for holding that the external world exists because we naturally *believe* it to exist. Of this he says, "The illation is incompetent, inasmuch as it erroneously assumes that our belief of an external world is a primary datum of consciousness. This is not the case. That an outer world exists is given us, not as a "miraculous revelation," not as a "cast of magic," not as "an instinctive feeling," not as a "blind belief." These expressions, in which the Cosmothetic Idealists shadow forth the difficulty they create, and attempt to solve, are wholly inapplicable to the real fact. Our belief of a material universe is not ultimate; and that universe is not unknown. This belief is not a supernatural inspiration; it is not an infused faith. We are not compelled by a blind impulse to believe in the external world, as an unknown something; on the contrary, we believe it to exist, only because we are immediately cognisant of it as existing."§ We believe the world to exist, therefore, because we are immediately cognisant of a resisting something externally in correlation with our organism. But does not our philosophical belief extend further than this our actual knowledge of the world? The impression conveyed by the tenor of Hamilton's dissertations clearly is that it does.

Hamilton, for instance, maintains that it is "sufficient to

* Note D* (13).

† Note A, p. 747.

‡ Note D* (26).

§ Note A, p. 749.

establish the simple fact, that we are competent, as consciousness assures us, immediately to apprehend through sense the *non-ego* in certain limited relations;” and that “it is of no consequence whatever, either to our certainty of the reality of a material world, or to our ultimate knowledge of its properties, whether by this primary apprehension” (the resisting something) “we lay hold, in the first instance, on a larger or a lesser portion of its contents.”* The conclusion at which we must arrive then, according to Hamilton, is that we have no immediate knowledge of the primary qualities as they exist in the extra-organic world, but that inferring their objective existence, we clothe the resisting something with primary qualities, after the pattern of those which we apprehend in our own organism—a field of space occupied by matter which we are forced to conclude is continuous with an external field. As to the secondary qualities, we also *infer* an external cause for them, but what it is in itself we know not, it “being known only, if known it ever be, by observation, induction, inference, conjecture.”†

Does Hamilton maintain that we know an external world as it exists *per se*, or out of relation to our intelligence? He clearly and emphatically declares that we do not. “All knowledge,” he says, “is a relation—a relation between that which knows (in scholastic language *the subject* in which knowledge inheres), and that which is known (in scholastic language, the *object* about which knowledge is conversant); and the contents of every act of knowledge are made up of elements, and regulated by laws proceeding, partly from its object, and partly from its subject.”‡ In still more definite terms he declares, “I have frequently asserted that in perception we are conscious of the external immediately and in itself” (viz., the resisting something). “This is the doctrine of Natural Realism; but in saying that a thing is known in itself, I do not mean that this object is known in its absolute existence, that is, out of relation to us. This is impossible, for our knowledge is only of the relative. To know a thing in itself, or immediately, is an expression I use merely in contrast to the knowledge of a thing in a representation.”§ If Hamilton maintains that nothing can be known out of relation to us, whence the supposed great divergence between his

* Hamilton's Reid, note B, p. 814.

† Note D* (20).

‡ Note B, 808, foot note. Hamilton, in this, follows Kant; he thinks the matter of knowledge comes from without, but the form from within.

§ Hamilton's Reid, p. 866, foot note.

doctrine and that of Ferrier, who does not deny the existence of matter, but maintains that it can exist only in synthesis with knowing. Hamilton affirms that we have an immediate cognition of matter as contrasted with mind, in our organism, and of an extra-organic world as a resisting force opposed to our locomotive energy, but neither of the one nor the other absolutely or *per se*. The immediate knowledge of these, therefore, is deemed by Hamilton no proof that the world, as *we* know it, exists independently of man. With him, apparently, the external world, according to his Law of the Conditioned, is *for us* the mean between the extremes of Idealism and Materialism, or a Dualism ranging between the two. What is it with Ferrier but the synthesis of Knowing and Being?*

We do not think that Hamilton has detected the full extent of our immediate knowledge of the extra-organic world. It is clearly observable that the sense of touch can operate when the motory centres and the rest of the locomotive agency are in a state of inaction, but that these cannot, in a state of health, operate except the tactual sense operate as well. The locomotive energy, therefore, normally, pre-supposes the sense of touch.† Now, in this sense, there is involved a perception of outness of sensitive minima in relation to each other, together with a sense of contact. This contact is clearly felt to be a sensation of *diffused* resistance between our organism and something external to it, the resistance being distinct from that experienced when the locomotive energy is at work, and felt, it would seem, by means of other nerve-threads besides those *specially* belonging to the sensitive nerves of the motor-system, namely, the cutaneous. We have, then, in touch an immediate knowledge of a *non-ego* in correlation with some portion of the cutaneous surface; and since the sensitive minima of this surface are apprehended as external to each other, and individually in contact with something extra-organic, it follows that we perceive the *non-ego* as an *extended* something exterior to our organism. Indeed, it is impossible to conceive contact but as taking place between two extended bodies. Contact with nothing, or the contact of an extended with an unextended substance is contradictory

* We do not think that Mr. J. S. Mill has represented Hamilton's doctrine truly in this respect, in his "Examination."

† For when the sense of Touch and the muscular sensibility are lost, while the power of movement still remains *e. g.* in a person's arm, its movements can be guided by the sense of sight only.

to all experience. Wherefore it is manifest that in order to effect a contact there must be two extended substances, and that in touch we are immediately cognizant of one extended as in correlation with another. By means of the motory centres, and the apparatus in connection with them, we furthermore get to be presentatively conscious of this extended superficies, as the solid also; hence our leading ideas of matter—it is extended in length and breadth, and moreover in depth, while it is also solid or resisting, figured, &c. We have, therefore, an immediate cognition of the *non-ego*, in the first place, as the cutaneo-resisting or the extended (superficial) resisting something; in the second place, as the musculo-resisting or the solid resisting something. Both kinds of sensation are a feeling of resistance, but in Touch the motor agencies are not necessarily involved, whereas in muscular resistance the tactual nerves always are when not impaired. We also believe it probable that during the movement of our bodies, we must be immediately conscious of one portion of space as in correlation with other portions, that is, of organic space—our extension—as in correlation (unbroken continuity) with extra-organic space. At all events, *as movers we must be immediately percipient of the possibility of motion for a person possessing extension*, and this original datum will be found to be a fertile source of our spontaneously reasoned-out knowledge concerning space in general. But what is meant by immediate knowledge?

By immediate knowledge is meant the knowledge of a thing in itself, or not through something numerically different from itself representing it. It is the original consciousness of anything, that without which it cannot be known at all. The first step in immediate knowing is perception, in which an object must necessarily be known in itself *as it is*, or without the intervention of something else, for then the only object which is really known in itself is the medium, and the supposed object represented by this medium is, by the Idealist, legitimately deemed non-existent. Therefore an object must, in *immediate* knowledge, be known in itself as it is. If you say that it is not known as it is, but as it is not, you again imply two objects, the only one which is really known being that which you know as something that a supposed object is not. Therefore the object directly known must be known as it is.

But how does this directness of knowledge comport with the physiology of the brain and nervous system? It will be

maintained, in opposition to this doctrine of immediate consciousness, that the sensations and consequent notions by which we realize the existence of the foot are in the brain, and that, consequently, we can have no immediate knowledge of it in itself; the mind is not face to face with it, for a long line of nerves intervenes between the foot and the brain. It is conceivable, indeed, that this line might be increased to any length; that, for instance, the foot might be at Dover and the brain at Calais, without causing any difference in the sensations experienced in the sense-centres located in the head. Since this is the case, how can it be said that we have an immediate cognition of the foot?

Immediate knowledge is knowledge without the intervention of any *prior knowledge*, it is knowledge at first hand; and in this sense the foot, of course, is immediately apprehended. But then immediate knowledge also means knowledge of a thing as present to the mind both in time and, in a certain sense, in space also, in its *When* and its *Where*. How this latter can be, it is no easy task to decide, for, as will be seen, the point involves one of the most perplexing of paradoxes. "It is the condition of an intuitive perception," Hamilton declares, "that a sensation is actually felt *there where* it is felt to be. To suppose that a pain, for instance, in the toe, is felt really in the brain, is conformable only to a theory of representationism. For if the mind cannot be conscious of the secondary qualities, except at the centre of the nervous organism, it cannot be conscious of the primary, in relation to its periphery; and this involves the admission, that it is incompetent to more than a subjective, or ideal, or representative cognition of external things.*

Hamilton had subsequently to modify these views, and to admit that the evidence afforded by physiology indicated that the seat of sensation is the brain. He is of opinion, however, "that it makes no essential difference in this doctrine whether the mind be supposed proximally conscious of the reciprocal outness of sensations at the central extremity of nerves, in an *extended sensorium commune*, where each distinct nervous filament has its separate locality, or at the peripheral extremity of the nerves, in the places themselves where sensations are excited, and to which they are referred."† It seems now, however, to be in a fair way to be established that sensation has its seat exclusively in the sense-centres situated at the

* Hamilton's Reid. Note C, p. 821 (2). † *Ibid*, p. 861, foot note.

base of the brain. Injury to the olfactory lobes is attended with the loss of smell, and the deprivation of the corpora quadrigemina causes blindness as effectually as the destruction of the eye itself. But Hamilton thinks that this makes no difference as to the fact that we know an object in its *Where*, or its own locality, because the nerve-fibres which connect the periphery with the centre are not sensitive throughout their whole length, are not sensitive *lines*, but simply sensitive *points*; for if a sensitive nerve is excited in any part of its length, it only appears to be excited at its peripheral extremity; and this is the case even if a portion of the nerve be cut off. Thus when a man's leg is amputated, he will still experience pain as if it were in the foot. The fact seems to be that the nerve is not sensitive at all, but that it merely serves to stimulate into activity the cell to which it is attached in the sense-centre, and that the sensitive point is the result of this activity. But how does this explain the difficulty as to the immediacy of our knowledge of objects in space? Let it be granted that, in consciousness, the whole line of nerve from the periphery to the centre where the sensitive point is experienced, is in consciousness nil; still, in anatomy, it is a fact that the sense-centre is some distance from the remote extremity of the nerve, and cannot, consequently, be conscious, face to face, of an object impinging upon that extremity—cannot be an immediate knowledge, in space, of what is there located. If we interrogate our extended sensibility, one kind of consciousness, the clear reply is, that we know an extended object in its own place, and yet this sensibility declares that locality not to be the brain, whereas physiology, the deliverance of another kind of consciousness, teaches that it is. How are we to reconcile these seemingly conflicting statements? Hamilton, as far as we can see, has left the problem unsolved, and has therefore failed fully to substantiate the doctrine of immediate knowledge.

That there is an extended sensorium does not admit, we think, of question. For instance, the general sensibility is extended, and the tactual and the visual sensations are extended. Weber's experiments show to what an extent the sensitive minima of the body are felt to be external to each other. Every one is aware that a pain in the foot cannot be confounded with a pain in the hand, and this independently of the association of internal sensations with tactual and visual. There is manifestly an extended sensibility diffused throughout the organism, namely, that feeling by means of

which, during our waking moments, we realize, without intermission, the body as occupying space. The tactual sense does not perform this function, for its sensations are not experienced in the face when nothing touches it, nor in the body generally, with the exception of the sole of the foot possibly, when it is unclad. As to the muscular sensibility, that too does not meet the requirements of the case, for it is not constantly experienced, and when it is, is not all-pervading. Besides, as we have already shown, the locomotive sensations normally suppose the tactual. If, therefore, it is evident that the latter are not the means by which we incessantly realize ourselves as occupying space, it is much more evident that the former are not. We conclude, therefore, that there must be in the brain an extended sensorium which has during our waking moments a general and unceasing function to perform, that, namely, by which we are conscious of ourselves as extended beings. Then based upon this, we have, as more special centres of extended sensation, the sense of touch and the sense of sight. There are in fact *three fields* of extended sensibility. The central field is the whole of the organism. The next field is the periphery of this, the province of the sense of Touch. The third field is that of Vision, external to both the former. The muscular sensibility is experienced within the two former fields. What is particularly to be observed is that each of these fields excludes the others. In general sensibility the objects are all pertaining to self, they all partake of the character of emotion, and are therefore such that they cannot be attributed to an insentient object. In Touch and Vision, on the other hand, the object cognized is very prominently contrasted with self as a not-self, as an object of a strictly unemotional kind, an object of such a character that we can impute and impute it solely to an extended substance or material entity.

The general sensibility, then, complemented by touch and the muscular sense, forms a complex extended sensorium which takes cognizance of all that is felt *in* the body, and of all that is externally in correlation with it, whether as touching it, or also resisting its locomotive energy. Sight is experienced as taking note of objects which are external to this sphere. Using the term now in a general sense, we go on to say that, in the extended sensorium, the head has a distinct locality from the trunk, the trunk from the limbs, and these from each other; and yet it is an established fact that the head contains the sensorium. How is this discrepancy to

be removed? The brain, although located in the skull to the touch and the sight of the anatomist, and even to ourselves when we have the headache, as an organ of consciousness is not consciously located at all. The brain is known to be without tactual sensibility, and the operations of the mind in consequence are not felt to be located in the brain, but are, as it were, projected into the locality felt to be occupied by its objects.

In *knowledge*, then, the head does *not* contain the rest of the body, for two separate localities cannot be squeezed into one, nor can a lesser body be made to contain a greater. Wherefore extended objects are *known* in their own locality, and cannot without contradiction be said to be known in the locality already occupied by another object.

Although, then, the head contains, in one sense, the extended sensorium, the sensorium also, in another sense, contains the head as well as the rest of the body; that is, they are mutually containing and contained, but in different senses. The skull contains the sensorium as part of the organism, but the sensorium contains the skull in so far as the nerve-cells concerned in its cognition form but a *small portion* of the sensorium. Indeed, let us but reflect upon what the effect of cognizing some thousands of sensitive minima must be, by means of the cells of the sensorium, as severally *out* of each other, and it cannot be imagined to be any other than that which is familiar to all men, namely, that every portion of the organism, whether it be the cutaneous surface or an internal part, is known as having a place of its own, which is not in the least liable to be confounded with that of any other. The foot cannot say to the hand, "I am in you," or neither of them to the head, "I am in you."

In further explanation of this subject, we would mention that it does not seem to us unlikely that the line of nerves, acting as a medium of communication between the skin, for example, and the tactual sense-centre, has been necessitated by the fact that as differentiation has taken place in the animal scale, it has become impossible, owing to want of room, to interference with other organs, and to hindrances to their own development, that the sensory-ganglia should be there where the peripheral impression is made. These ganglia, therefore, are placed where they can best perform their own functions without impeding that of the other organs. This necessitates the existence of lines of communication between the periphery and the remote sense-centres. Now, what we would draw

attention to is the great probability that these lines of communication are practically the same as if they did not exist. Remember they are sensitive *points*, not sensitive *lines*. We may consider, therefore, that they are simply a device for bringing about the solution of the following problem :—How, when the sensory cells are located, for the better ordering of the animal economy, at a distance from the periphery, to make this productive of no more difference in the reports which they yield than if they were face to face, at the periphery, with the impression which the nerve-fibres convey to the brain.

As far as there is room, nerve-ganglia, performing the lowest nervous function, are placed here and there, even in man, throughout the organism. In some of the simplest animal structures this is found to be the case with all the nerve-cells, and, with Mr. Herbert Spencer and Dr. Lockhart Clarke, we think it highly probable that these collections of cells are seats of feeling in such animals, although they cease to be seats of feeling in animals which are higher in the scale.

It does not seem improbable that the primitive nervous system is a germ or medley potentially containing within itself the various grades into which we find the nervous system developed in the human species. Should this be the case, and the protoplasmic theory implies it, we must expect to find marks of a very composite or miscellaneous and undefined consciousness, feeble in character and low in degree, in those animals whose nervous system is in a non-differentiated state. The various kinds of nerve seem at first to be rudimentary, and in a state of fusion. They form a medley low in structure and feeble in function. Advancement takes place when out of this medley the lower elements become differentiated, causing the elimination of the higher ones, and making it necessary that these should emigrate to another locality, forming the spinal cord, which then becomes the seat of consciousness, *such as it is*. The excito-motor nervous system is the next to be differentiated. This now claims the spinal cord for itself, and constrains the higher elements of the medley to seek a seat elsewhere, which occasions the sensory ganglia to come into existence. At this stage the advancement made is very striking. The inferior systems, owing to their segregation, are much more complete in structure and efficiency, while those elements, which are still in a state of fusion, have grown greatly superior to what they were in their more composite stage of fusion. The next step seems to be the

individuation of the sensori-motor system by the expulsion of the intellectual functions, which have now to migrate to a higher seat. Dr. Bastian would persuade us that consciousness is among the elements thus thrown out. That intellectual consciousness is eliminated is manifest, but that sense-consciousness remains is, we think, equally plain. Did not the latter keep to its original seat, there would be an unaccountable leap from the excito-motor system to the intellectual. Let us endeavour to realize what sense-consciousness is. I hold a ball in my hand. This ball is revealed to me as a sensation—sense-consciousness; but this consciousness is not seated in my hand, but, as appears most likely, in the tactual sense centre. In fact, then, what I call the ball is, *for me*, the sensation of the ball. External objects, *minus* the sensation of them, have *for us* no existence, for they would be less than the *minimum scibile*.

This limitation, therefore, is binding upon us, namely, that an external object and the sense-consciousness of it cannot be discriminated from each other. But now mark, the ball (*i. e.*, the sensation) does not exhibit intellectual functions, but it does manifest consciousness, namely, that in virtue of which it exists *ad nos* as a ball. Sense must present or reveal the so-called external object, else how could the latter possibly exist for us? Perhaps you will reply, it exists for us through the intellect, as was said by Aristotle and others—“intellect sees and intellect hears.” We admit that in so far as we know an external object to exist, that is, know the ball, for instance, by discriminating one quality from another, to be possessed of roundness, hardness, size, weight, &c., and to be felt as a *non-ego*, sensation is *inseparable* from intellect, but is not *indistinguishable*. Now, sensation and the object of sensation are really not to be distinguished from each other. It is the same with intellectual consciousness and its object commonly called an idea or notion; and this, it appears, must be the case, for if we reflect upon the matter, we find that consciousness out of relation to the object which it presents is quite unthinkable. We can only examine consciousness by examining it as it exists in some mysterious sort of fusion with its object. Mere consciousness, just as much as a mere object, is quite incogitable. Sense-consciousness, the sensational object, and the so-called external object (bearing in mind that intellectual objects are not here included) are one and the same thing—simple, indivisible, elementary—viewed in various aspects. In like manner, an intellectual object, or an

idea, and the consciousness of the idea are one and the same indivisible thing regarded in different aspects. "Here object and act are merely the same indivisible mode of mind viewed in two different relations."*

In the preceding paragraph it has been shown that consciousness cannot be distinguished from its object, but it does not follow from this that one act of consciousness cannot be distinguished from another, or one instance of consciousness *plus* object from another instance of consciousness *plus* object. Thus, in perception, sensational objects are, although in knowledge, inseparable yet clearly distinguishable from intellectual objects. For instance, the sensational object is felt to be either an affection of, or to be in relation with, the organism. The intellectual object is not, but is experienced as confined to the mind alone. The sensational object, in certain instances, is felt to be extra-organic; the ideal representation of this, as in the mind only. The sensational object is at the outset, and in the order of causation, a *sine quâ non* of the intellectual object, but not *vice versa*, for the former is the original, the latter the representation. The sensational object cannot be commanded into existence by the will. Merely saying "Depart in peace, be ye warmed and filled," will not bring coal to the shivering, or bread to the hungry. But the intellectual object almost invariably answers *adsum* when its name is called, which shows that it can be summoned into existence after the sensational object that first awoke it has vanished, which is a very marked distinction between it and the other. Again, we often have an object dimly present in outward sensation, and a set of erroneous notions spring up in connection with it which strike us as very strange, and cause us to examine the sensational object more closely. We then have the erroneous notions replaced by the correct ones. Now, if one and the same sensation can be common to different sets of ideas, does not this clearly show that a sensational object, although, in knowledge, *inseparable* from its related intellectual objects, is quite *distinguishable* from them; and that the metaphysical dogma—"It is impossible to discriminate with any rigour sense from intelligence," is not altogether true. For these and the other reasons assigned, then, we believe that sensation cannot be seated in the same cells as the intellectual operations; and, in opposition to Dr. Bastian, we are inclined to think that the sensory ganglia do not eject sense-consciousness when they become finally differentiated.

* Hamilton s Reid, p. 809.—10 par.

A Plea for Convalescent Homes in connection with Asylums for the Insane Poor. By REV. HENRY HAWKINS, Chaplain of the Middlesex County Asylum, Colney Hatch.

IN every large asylum there are probably convalescents of two distinct classes. 1, Convalescents about to be dismissed nearly, or quite, recovered; and 2, Convalescents who, under favourable circumstances, would be discharged, but who are considerably permitted to remain, because they neither have friends able or willing to receive them—nor are themselves equal to the effort of procuring suitable employment—nor, again, are they, in many instances, persons who from their antecedents or habits can suitably be transferred to the Workhouse.

With respect to these two classes of Convalescents, let us consider first the case of those who, after treatment for a longer or shorter time in Asylums, are about to be discharged. A certain proportion of these are sent out under favourable conditions. They have a more or less comfortable home awaiting them. Relations are ready to welcome them on their return, and to assist them in resuming their duties. In some cases, the husband, after discharge, returns to an affectionate wife and children, glad to receive the “bread-winner” home again, and to make him as comfortable as they can, or the wife is restored to the husband and family, who have sorely missed her presence in the household—or the son or daughter may have a kind parents’ house in which they can rely upon obtaining temporary shelter, and considerate treatment; again, in a few cases, private means, or exceptionally favourable circumstances, may enable a convalescent, after discharge, to re-commence life under conditions likely to confirm, or, at least, not to counteract, the cure which by God’s blessing has been effected.

But, with many, the case is very different. When after a long course, perhaps, of anxious and skilful treatment, a patient who entered the asylum with disordered mind, and often with diseased body also, reaches at length that stage of convalescence beyond which improvement is scarcely attainable within hospital walls, and can only be secured in the healthier atmosphere of ordinary life—his discharge, as a rule, takes place. Now it is of the utmost importance that

the completion of his convalescence should not be frustrated, but that his restoration should have a fair chance of being confirmed. The days and weeks immediately succeeding the termination of a convalescent's residence in an asylum are often very critical. The prospect of permanent recovery greatly depends on the patient's circumstances on first resuming life's ordinary associations. Favourable surroundings may perfect, while adverse influences may irremediably counteract his cure. The state of the mental convalescent is susceptible of influences which would not affect persons in robust health.

Now, in what position are many poor patients on their discharge from asylums? The following remarks will have special reference to *Female* convalescents, as it is their case which is chiefly considered in this paper; though its observations apply, to a great extent, to both sexes. There must be always a certain number of female patients who, on their discharge from asylums, have no congenial home to which they can resort. Their near relatives may be dead, or at a distance, or unable, or reluctant, to receive them. At longest, lodgings for a day or two may be all they can reckon on, or if temporary hospitality is offered for a longer time, there often may be circumstances which render the place to which they are invited utterly unfit for the sojourn of delicate convalescents immediately after leaving hospital wards. The squalor and wretchedness of the locality—the disorderly habits, or worse, of the household—the miserable accommodation—the insufficiency and bad quality of the food, or the half grudging spirit with which the incomer is received, may prejudicially interfere with the progress of convalescence. But suppose that a day or two of rest has been secured after leaving the asylum: in many cases it cannot be prolonged. The struggle of life must be forthwith commenced. Bread must be won. Some means of gaining a livelihood must be found. But the difficulty of obtaining employment under such circumstances is *unusually* great. Many female convalescents, though quite capable of occupying themselves usefully and remuneratively, are yet wholly unfit to push their way. They are unequal to the effort of pertinaciously asking for work. Constitutionally timid, or reserved, they shrink from the painful necessity of urging repeated applications for employment; and, perhaps, of receiving discouraging replies, or rude denials. They have, moreover, a distressing consciousness, that the very nature of their recent affliction is a

hindrance to their success in life. Often after an interval of anxious, but ineffectual, search for a livelihood, their mental powers which had scarcely recovered their balance, again give way, and the unfortunate individuals, whose chance of restoration appeared recently to be so hopeful, relapse into insanity. They are re-admitted into the asylum or workhouse, or, alas! in some cases, in a season of morbid despondency and blank despair, terminate by an uncontrollable act of violence their miserable lives. Now it may be safely maintained that if, on quitting an asylum, patients who had no suitable home could be temporarily received into some refuge where their convalescence could be further confirmed, and assistance rendered them in procuring occupation adapted to their circumstances, many who otherwise hopelessly relapse, would again become, and continue, useful members of society.

Again, there are probably convalescents in most large Asylums who yet continue to be permanent inmates, and gratefully acquiesce in their prolonged residence, because they are utterly unfit to face the world without the assistance of friends on their first setting out. Patients of delicate or nervous organization, or refined habits and temperaments, young females requiring guidance and oversight, gentlewomen who have become destitute through misfortune; many of these, if dismissed when fairly convalescent from the refuge in which they have experienced kindness and sympathy, would have frequently no resort but the workhouse, and so are occasionally, for very compassion, still retained on their list by authorities of asylums, who in their charity shrink from subjecting these convalescent, yet sensitive members of their community to the harsh usage of the outside world.

Now it may be worthy of consideration whether the establishment of homes, in some form or other, for the reception of poor convalescents from asylums, who have no home of their own, or friends to receive them, would not be a useful addition to the charitable institutions of the country. There are many resorts for the completion of the cure of those who are recovering from *bodily* maladies, but homes for the reception of destitute convalescents, on recovery from *mental* afflictions, are not so numerous, at all events, as the case requires.

Existing Retreats for ordinary convalescents would probably not be generally open for the reception of the description of invalids to whom this paper refers. A natural prejudice on the part, if not of the authorities of existing refuges, yet of their inmates, would practically preclude the admission of

persons who had recently recovered from mental maladies. And even if mental convalescents were admitted, it may be questionable whether the two classes would be found to associate together satisfactorily. Moreover, the convalescent homes at present in existence cannot entertain even all those cases for which they were originally designed.

These homes might be made to serve many useful purposes; their primary object would be the temporary reception of convalescents immediately after their discharge. They would thus be a kind of half-way house between the asylum and the world. Probably most convalescents would resume their places in life with fairer prospects of success if the transition were not so abrupt from the quiescence and dependency of hospital life to the enforced activity of ordinary existence. Even under the most favourable circumstances, the first return to work after prolonged illness is a severe trial; it must be often a searching ordeal to convalescents from Asylums. A home would afford change of scene, of air, of associations; it would bring healthy influences to bear upon its inmates, and send them out with hearts and nerves better braced to bear life's struggles.

But it would benefit its inmates in other ways also. During the period of their sojourn they would possess a favourable opportunity of looking out for employment. This they cannot do while still within an asylum, and even if they could, so long as their connection with it continued unsevered, their endeavours to obtain occupation would be seriously prejudiced, if not altogether frustrated.

Their search after work would be far more likely to be successful after their final discharge. Besides, they would be in a position to look for employment without the distressing anxiety consequent upon the knowledge that their bread from day to day was dependent upon their *immediate* success. Their maintenance for a limited time in the home would enable them to seek for work without solicitude about their support for a little while, and deliberately to select such employment as would be likely to be reasonably adapted to their capacity.

Part of the duties of the promoters of such an institution would be to aid those under their temporary charge by making inquiries after situations, by inviting benevolent persons to give a trial to the convalescents, and by keeping a registry which would be a means of communication between employers and enquirers after places. This opportunity of seeking for

employment under advantageous circumstances, with the friendly assistance of those interested in their welfare, would probably be one of the most useful features of such a convalescent home. The inmates have often virtually to recommence life, and they require all possible sympathy and help in their endeavours to fill their place in the world, and to discharge their duties with credit and even moderate success.

But such a home, besides being available for the reception of patients on their discharge from asylums, might also be a harbour of refuge for those former inmates of asylums who, after having gone out into the world and recommenced their duties, after a time again needed a brief respite from anxiety and toil, which may threaten, if their pressure be not removed, again to disturb or overthrow the mind's balance. Many cases probably occur of relapse into insanity, and of return to asylum life, which might be prevented if those whose minds had been before affected could "come apart and rest awhile," at times when life's burden was becoming, perhaps from exceptional causes, more than the mental powers could sustain. A few days of seasonable rest would doubtless in many instances suffice to afford that repose to the jaded minds and nerves which was needed before again bearing the burden and heat of the day.

A brief retirement in a quiet restful home would sometimes obviate the necessity of a re-admission, perhaps a final return to a lunatic ward; an interval of withdrawal from life's hard conflict, quiet and entire rest, pure air, good food, encouragement, friendly advice, sympathy afforded at the critical time, might save many a feeble-minded, desponding fellow-creature from relapsing into actual insanity, and give her heart to rise again and begin again. The opportune shelter of such a home as that proposed would be to many an over-wrought mind as welcome as the harbour to the storm-tossed vessel. That brief interval of seasonable repose would often prove the "stitch in time," knitting up the "ravelled sleeve of care," which otherwise might not be repaired except (if at all) after a long, tedious process of restoration.

It may be further deserving of consideration whether such homes might not be utilised, to a certain extent, as places where young women might receive instruction and training qualifying them to become nurses of a higher grade than those ordinarily found in asylum wards. At any rate, a registry of persons desirous of undertaking the duties of nurses might be kept, those only being entered as candidates

who appeared to be thoroughly qualified. The names of carefully selected applicants might be submitted to the authorities of asylums, who would, no doubt, be glad to recruit the frequent gaps in their ranks from candidates who had already stood the test of careful enquiry respecting their aptitude for the special duties of asylum attendants. The management of these homes would be determined by the special circumstances of each establishment. It would probably be desirable that they should be entirely unconnected officially from the asylums themselves. There would, of course, be a resident head of the household. A lady of religious principles, sound common sense, cheerful disposition, with capacity for maintaining order, and of inspiring hope, might be found to volunteer her services. To each home would be attached a spiritual pastor who might be clergyman of the parish. A neighbouring practitioner would frequently consent to be the honorary medical attendant of the institution. The calls upon his services would not be likely to be many. It is contemplated that all the staff of the homes should be unpaid.

The *rules* for the governance of these homes should be few and simple; known to each inmate, who should undertake to observe them as a condition of enjoying the benefits of the society. Without entering into details, it is suggested that the rules should strictly require the attendance of the household at morning and evening family prayer. On the Lord's Day Divine service should be attended once at least, and, ordinarily, at the parish church of the district in which the home might be situated. It would be probably better not to have chapel services in lieu of attendance at church, as, so far as possible, the convalescent should not be secluded from society, but should mingle with those without, as one chief object of a home would be gradually to accustom its inmates to renew their associations with the world. Thus the nervous, morbid disinclination to mix with others which may occasionally be the result of a residence in an asylum, might be partly counteracted by the favourable reintroduction to ordinary life afforded by sojourn in a convalescent home.

It should be stipulated that all inmates should usefully employ themselves during their residence in the home, both on account of the efficacy of occupation, judiciously pursued, in establishing convalescence, and because it should be clearly recognised that all who profited by the establishment were called upon to contribute towards the maintenance and well being of the society of which they were members.

Work, however, should not be allowed to exceed healthful limits, or to become tedious or wearisome.

It must needs often be so in life's struggle, but immoderate labour should not be sanctioned in a home for convalescents. One of the leading features of such a community should be cheerfulness. Recreation should alternate with work. That was a wise rule made by the founder of an ancient society, that its members, after so much time spent in labour, should pass a regular interval in relaxation. Probably it would be best that in a convalescent home the amusements and recreations should be simple and inartificial; such as could be enjoyed by the inmates on their return to their own homes. It would be of service to point out what home pleasures are within reach, even under unfavourable circumstances of life, for recreation. When it is necessary to rouse the torpid mind—to divert the melancholy from their moody thoughts, to relieve the monotony of prolonged seclusion—special amusements are wisely called into requisition. Such diversions are, no doubt, effective in such cases, but they are not likely to be within the reach of convalescents on their return to their own homes; and often they may miss the pastimes which they were accustomed to during asylum life; so that it would be considerate to instil during their residence in the home a taste for such simple pleasures as are everywhere obtainable. Cheap attractive periodicals of a wholesome tendency should be brought under their notice. Arrangements might be made for supplying any selected serial. Gardening, particularly *window-gardening*, which is a popular recreation with many poor in large towns, might profitably be encouraged. An evening hour once or twice in the week, devoted to practising reading and writing, especially the latter, would be welcomed. Anyhow, in one way or another, one of the objects of a home should be to suggest to the temporary inmates ways of amusing themselves after work, or in the brief intervals of labour, which they would be afterwards able to practise, however they might be situated.

The domestic management of the house should be marked by homeliness and frugality. While all the arrangements should be comfortable and liberal, there should be an absence of those luxuries and embellishments, which, whatever good purpose they may serve in asylum wards, yet render them utterly unlike the rooms in which even the orderly respectable patients live when at home. Their intermediate abode, between the departure from the asylum and their return to

their own houses or lodgings, should be ordered after the fashion of a well-ordered dwelling belonging to the average class of patients. Habits of a domestic character should be substituted for such as may have been formed during asylum residence. By a kind of "annealing" process the convalescent should be gradually prepared to encounter life's trials.

An important consideration would be, how to provide for the *maintenance* of the household. But when the want of homes for the convalescent after mental illness became known, and recognised, and approved plans proposed for supplying it, there would be no more difficulty in raising the funds necessary for the support of a charitable institution of this, than of any other description. During their month of probation, previous to their final discharge, patients on trial may receive, at the discretion of the visiting magistrates, the full amount of their maintenance rate as inmates of the asylum.

This sum would slightly vary in different localities, but perhaps the weekly grant might be estimated at about 10s. Now if these homes were made really comfortable, and obtained a good report, there might be many patients who, not having homes of their own, or of their friends, would be glad to spend their month of probation in such dwellings as these, in preference to seeking ordinary lodgings. For, it is to be considered, that a donation of money, however considerate and useful a gift, cannot always secure lodgings affording the special advantages which a well conducted "home" would offer. And it might, in many cases, conduce more certainly to a patient's permanent restoration, if, instead of money being given to provide lodgings for herself, a temporary home were gratuitously offered in which, before the renewal of the stern duties of life, repose, freedom from anxiety, cheerful companionship, a favourable opportunity of obtaining employment, and soothing religious influence, might be secured.

But such homes should be *freely* open (as far as circumstances permitted) to the reception of those also who might not be able to contribute anything towards their support during their temporary sojourn. Both those poor convalescents who might have a maintenance grant on their discharge, and those also who, after having returned to the world, might feel their mental powers again giving way, and be desirous of warding off a complete relapse, should be admissible into these retreats.

As such homes as those referred to should be general throughout the country, and in connection with the various

county or district asylums, each neighbourhood would be called upon to support the institution with which it was immediately connected. It would be sure to receive its fair share of support, when once the useful nature of its work was recognised. Even apart from motives of Christian benevolence, considerations of economy might prevail with some to support institutions, which, by affording the several advantages indicated, to poor persons at a critical stage of their recovery, or in danger of relapse, might prevent them from becoming perhaps permanently chargeable on the public rates. Placing the subject on a low level, it is apparent that disease, whether of mind or body, is an expensive evil, and that it is better to be liberal handed to effect a thorough cure, or to ward off the return of a dreadful malady, than to make far heavier compulsory payments towards the permanent maintenance of perhaps the hopelessly incurable.

It might be preferable to hire suitable houses, or in some cases to obtain convenient lodgings for the accommodation of mental convalescents, instead of erecting buildings of attractive exterior for their reception.

For it would be extremely undesirable that the home of the convalescents should be considered, either by themselves or by the public, as an asylum for the insane, under different management and another name.

The homes should as little as possible attract the public eye. The more domestic their character, both as regards external structure and internal arrangements, the more likely would they be to be productive of benefit.

It is not pretended that the foregoing remarks possess any novelty. Doubtless the establishment of convalescent homes, for this peculiar class of invalids, has been both more fully considered, and more forcibly recommended, than has been done in this imperfect paper. Moreover, homes similar to those which it has been attempted to describe, may, in some places, be in operation.

The suggestion that such institutions should be established in connection with asylums may be by no means new, but, as has been remarked, "a suggestion may be ever so old, but it is not exhausted until it is acted upon, or rejected on sufficient reason."

At all events, it is hoped that attention may be, not uselessly, directed anew to a subject of no slight importance. It is of great consequence to ensure, as far as may be, that the mental recovery of numbers, who, by God's blessing on treat-

ment skilfully administered and patiently pursued, have become convalescent, should not be retarded or undone, on leaving the asylum.

A home for mental convalescents, in connection with asylums, is still a "missing link" of the chain of our charitable institutions.

Such a home would be a blessing indeed to many otherwise homeless and friendless, on their first discharge, and also to those feeble minded ones who are in danger of being overborne by the stress of anxieties and struggles, unless they can find some friendly sanctuary, for a little space, from the exhausting toils and harassing cares of daily life.

PART II.—REVIEWS.

Insanity and its Treatment: Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. FIELDING BLANDFORD, M.D., Oxon. Edinburgh: OLIVER and BOYD; p. 435.

The publication of anything like a text book on the subject of mental diseases must always be an event of special interest to the readers of this Journal; and it is not without anxiety that we examine such a treatise. It is not merely that we desire to obtain a manual of real practical use to the student, and hope to find the author making or exalting an honourable name, but that we regard such productions as indices of the progress and direction of professional thought and of the position which our specialty holds.

It is, therefore, with great pleasure that we find a satisfactory fulfilment of our hopes in the pages of Dr. Blandford's treatise. It is more suited than any book yet published to the requirements of the ordinary student of medicine; the pathological views which it inculcates are clear and sound; and the recommendations as to treatment indicate that the mind of the author has not been narrowed by its special attention to one branch of practice. The first two lectures are devoted to the physiology of psychical action, and present the subject in an intelligible manner, and from a useful point of view. It is carefully pointed out that those mental manifestations with which we, as physicians, have to do, are de-

pendent on the conditions of the brain, whether primarily or secondarily produced. And we are glad to see that no attempt is made to burden the mind of the student with a definition of insanity intended to comply with the popular or legal conceptions of the word. It is taken as granted that all mental disorder deserves the attention of the physician. "Whether we call it delirium, coma, wandering, or idiocy, mania, melancholia, or dementia, it depends on some pathological condition of the nerve centres, and implies a total or partial mental alteration or defect."

In discussing the pathology of insanity, the importance of emotional alteration, as compared with intellectual delusions, is properly insisted on. The depression, or exaltation, is a fixed result of the disease which may be present. The nature of the delusion, and sometimes even the very existence of delusion is, to a great extent, the result of accident. And this depression, or exaltation, says the author, "this emotional alteration, points not to a disturbance of one portion of the brain, but to a pathological condition of the whole nervous system of the highest significance. You will find it called by some 'emotional insanity,' and will read that the emotional part of the mind may be disordered, the intellectual remaining sound, and delusions not being observable. This distinction cannot, I maintain, be upheld. Patients may, or may not, have delusions; they may have the same delusions, and yet be very different in their feelings concerning them; the delusions are the result of the emotional and general condition, not the cause; and this explains our finding almost identically the same delusions in so many patients; for the emotions are the result of alterations of the health and energy of the entire nerve centres, and accordingly the man is depressed or excited, angry, noisy, or hilarious."

The difficult subject of the classification of insanity is treated by Dr. Blandford in his usual intelligent manner, though he does not succeed in unravelling the tangled web which, indeed, has defied all his predecessors.

"It has been proposed to classify insanity according to its causes. But," he justly observes, "it is entirely unscientific to describe the condition of a patient by simply naming an origin, possibly very remote, and to take no account of all the various steps by which the patient has advanced up to the time of our examination, or of the phenomena exhibited at the latter period. Again we shall find that insanity is, for the most part, the outcome of a number of causes, not of one; and this, if true, would at once vitiate such a classification."

The system to which he awards the highest place is that proposed by Dr. Skae, which has now, by very general consent, been accepted as the best we have as yet obtained.

"The merits of this division," he says, "are so great, and its superiority over all preceding so manifest, that it requires little or no comment. Without being a classification based exclusively on etiology, it yet takes into consideration the pathological condition of the individual, and the origin of the disorder. One could have wished that Dr. Skae had gone one step further, and banished altogether the word *mania*, which he apparently uses as synonymous with insanity; but which, in common parlance, conveys the idea of a peculiar mental state. Idiopathic mania, sthenic and asthenic, conveys no pathological meaning, and is, if anything, misleading. Schroeder van der Kolk, it is true, divided all insanity into idiopathic and sympathetic, the former arising, as he supposed, in the brain, the latter being caused by sympathetic disturbance of the bodily organs; but such vague divisions have no practical value, pathological or therapeutical. As I shall hereafter point out, the insanity which has no apparent cause, might almost invariably be termed hereditary, were it not that much more than this may as truly be called hereditary, the exciting cause only lighting up the transmitted and latent disease. Both Drs. Skae and Schroeder van der Kolk pass over too lightly the influence of hereditary taint. The pathological condition observable in a patient at the outbreak of insanity has its origin in numberless cases, not in the individual, but in his ancestors, and no classification or pathological description can be exact which omits to take this great fact into account."

According to Dr. Blandford, we must still, in practice, resort to the old plan of classifying our patients by regard to the conditions of the mind.

"It appears to me," he says, "that if we classify not the so-called forms of insanity, but insane patients, we shall be reminded practically of certain points which otherwise we might overlook. We wish, of course, to ascertain for the purposes of our classification as many as possible of the conditions of the patients before us. If the conditions of any two were precisely alike, the insanity would be identical; but as no two people are alike, no two people's insanity is alike. If we have before us a dozen patients whom we are to classify, and we find that four of these are in an extreme state of depression, four are delirious and in a state of furious mania, while the remaining are gay and exalted, presenting the well-known symptoms of general paralysis, it is plain that there must be allied conditions existing in the members of each one of these groups which bring about the peculiar features of it, and which do not exist in the other groups. What these conditions are we cannot scientifically determine, but we may be sure that those

which give rise to melancholy in a man of fifty are not the same as those which exist in a young man suffering from acute mania at twenty-five. Yet we may, according to some, group them together, and give to each the name of idiopathic insanity. I maintain that mania or melancholia denotes a group of conditions, most of which are unknown to us, though some may be ascertainable; that in our scientific classification the sum total of these conditions, which is presented to us by the whole of the symptoms evinced by the patient, is not to be laid aside in favour of some one condition or cause, whether proximate or remote. As physicians engaged in the cure and treatment of insanity will never be able practically to lay aside the classification of mania and melancholia, will be for ever compelled to treat melancholy as one thing and mania as another; so, I believe, that as pathologists they will comprehend under these general names a multitude of conditions which must be assumed, but cannot at present be demonstrated, but which year by year will be more and more differentiated and specialised, not by fixing our attention upon one, and one only, in each case, but by looking on every case as the result of an infinite number."

We believe that the general pathological idea thus conveyed is correct. Indeed, if we were to suggest any alteration, it would be in favour of its stronger enunciation. We have more fear than Dr. Blandford seems to have, that the student may too easily rest satisfied with the conclusion that he has in one case a melancholia to treat, and in another an access of mania. We would keep prominently forward the facts that melancholia or mania may either of them be symptomatic of widely different pathological conditions—that maniacal excitement may be an indication either of cerebral inflammatory action or of acute anæmia, and that there are conditions in which it is difficult to determine whether the symptoms are more melancholic or maniacal. We require, both for pathological and practical purposes, to have a classification whose species consist of diseases possessed of what Dr. Skae, in his able presidential address to the Association, called "natural histories." We require that what we are to accept as descriptions of diseases shall do more than indicate passing phases,—that we shall not at the initial stage of an affection declare a patient to labour under a disease called melancholia, at a further stage of the same affection say that the disease is acute mania, and after perhaps several alternations of these conditions proceed to make our diagnosis of a new disease called dementia. We do not believe that, practically, any experienced physician consciously performs these feats of nosological gymnastic; but we believe that the prevalent language

held by teachers on the subject tends too much to implant such ideas in the minds of students. Dr. Blandford frequently shows his consciousness of this weakness in our ordinary nomenclature; but we would have gladly welcomed a more strenuous effort to shake himself clear of it.

In the third and fourth lectures a very excellent sketch is given of many conditions associated with mental disorder, which may be looked upon as material likely to be useful in the foundation of a rational classification. Insanity depending on disorder of the sexual organs, puerperal insanity, insanity of masturbation, insanity of alcohol, insanity from other poisons, from excessive heat; general paralysis; insanity in acute diseases; insanity with epilepsy, with rheumatism, with syphilis with other neuroses, with diseases of the head, liver, heart, kidneys, and stomach. We do not say that in all or any of these we are presented with true pathological species; but we, at least, find the subjects treated from a sound point of view, and we are carried so far on the way that we ought to go.

Our object in the present notice is rather to introduce Dr. Blandford's treatise to those of our readers who are not already acquainted with it, than to attempt anything like an exhaustive criticism. We, therefore, have no hesitation in quoting the following passage as a fair specimen of the author's style, and of the plain and practical teaching which characterises the work:—

“There is,” he says, “an acute stage at the commencement of every case of insanity, though you may not see the patient during its continuance. But as insanity implies a deviation from the normal mental condition of the individual, so it connotes a physical disturbance of the brain function, with impaired sleep, possibly pain, heat of head, flushed or pale face, suffusion of eyes, throbbing of carotids, and such like symptoms of cerebral disorder. This is the period of emotional alteration visible to others, of which the patient himself may or may not be conscious.

“In the majority of instances this change is one which makes the patient feel or think that something is amiss with him, as in truth there is. His consciousness, however, of something being wrong with his head or his system generally, will vary much. He may be quite aware of it, and may seek advice and assistance like any other patient. He is more likely to be unconscious of his real condition, and to attribute the feeling he experiences to external causes. According to the feeling, its degree and intensity, will be the nature of the cause to which it is ascribed, and the means taken to get rid of it.

"The defective condition of brain operates here in two ways. First, the lack of nervous energy brings about the feeling of there being something wrong, and this may vary immensely in degree; secondly, the disorder in the various portions of the brain reduces it to such a state that the patient is unable to see the absurdity or impossibility of the explanations which he gives.

"A man or a woman feeling great depression of spirits proceeds to account for it according to his or her views. One thinks beggary the greatest evil that can befall him, and straightway fancies himself ruined, his wife and children starving, and the officers at the door to hale him to prison. So imperfect is the action of his entire brain that he fails to assure himself, from actual inspection of his accounts, that everything is going on as usual. Another looks not at the things of this life, but at those of the future. His soul is lost, he is in the power of the Evil One, he is Satan himself, or Antichrist—there is no hope for him. And inasmuch as the feeling experienced is strange, unaccountable, or mysterious, patients fly to the mysterious for the cause thereof. It is due to mesmerism, to electricity, to secret and loathsome disease hidden in the flesh and bones, destroying heart, stomach, and bowels, though not to be discerned outwardly. The ignorant man will think it due to witchcraft, or the devil. According to his stores of knowledge, his education and experience, each will invent a cause for that peculiar condition of which he is aware, but which he cannot rightly explain. Having no ideas connected with this feeling, he expresses it in those habitually associated with a feeling of deep gloom, anxiety, or displeasure. Feeling himself peculiar and changed, and another man, he thinks that all men are looking at him, pointing at him, deriding him. The cabmen and omnibus men beckon to and mock him; the passers-by avoid him. And in the same way all the newspapers write about him; all the mysterious advertisements refer to him. If he cannot fix his annoyance on anyone he knows, he thinks bands of unknown conspirators are plotting against him, and that these can, by occult and supernatural means, affect him, even when far distant. Then as he feels discomfort in this or that part of his body, he says his head is of brass, or he is galvanised, or his inside is burnt with fire. With all or some of these delusions he may vary greatly in his emotional display, being profoundly dejected and in a state of melancholia, or being irritated or angry, and inclined to act on the offensive, when we call his affection mania. And yet he may be equally melancholic and equally maniacal without his ideas being perverted into delusions, though they will be tinged with his prevailing feeling. Similarly, his delusions will range from possibilities, or even probabilities that require some examination before they can be pronounced delusions, up to the wildest absurdities and the most incoherent nonsense that a madman can utter. The latter are indications of a much greater brain-disturbance, a greater disconnecting of the relations of the various portions of the brain, and impairment of

the brain-force and brain-circulation; but the prognosis is not always on this account more unfavourable. They bear the same relation to the possible delusion that the dreams and nightmares of the fever patient do to the natural dreams of the healthy sleeper."

In regard to treatment, Dr. Blandford gives much safe and useful advice. He speaks strongly in favour of chloral in all forms of insanity accompanied with sleeplessness. Opium he regards as seldom useful in the early stage of any form of mental derangement, but thinks that the melancholic state, especially in the sub-acute form, is most benefitted by its employment. In prolonged delirious mania, he thinks that it "never does good, and may do great harm. Large doses of morphia," he says, "not merely fail to produce refreshing sleep, they poison the patient, and produce, if not the symptoms of actual narcotic poisoning, at any rate that typhoid condition which indicates prostration and approaching collapse. I believe there is no drug, the use of which more often becomes abuse, than that of opium, in the treatment of insanity. Do not be led away by the fatal facility with which you can administer it by subcutaneous injection. Inject it in the case of a melancholic patient, if you like, but here, in this furious delirium, you must abstain from the administration of opium in all its forms." It is impossible, in discussing the treatment of melancholia, to exaggerate the importance of impressing such advice as the following on the minds of students preparing for general practice:—

"We read that patients refuse their food because of dyspepsia, and that the latter is indicated by the foul, coated tongue, foetid breath, and loaded bowels. I am obliged to say that I think all the symptoms of dyspepsia are the result, and not the cause, of the depressed nervous condition; that the tongue is covered with old dead epithelium, which for the same reason is not thrown off; that the foetid breath is caused by this, or is due to actual starvation; and that the loaded bowels must also be ascribed to the want of general power. And I say this with some confidence, having treated a considerable number of these cases, and having removed all the symptoms by means which were in no degree directed to cure dyspepsia. This is the kind of diet which I have frequently given for the purpose. Before getting out of bed in the morning, rum and milk, or egg and sherry; breakfast of meat, eggs, and *café au lait*, or cocoa; beef-tea, with a glass of port at eleven o'clock; and a good dinner or lunch at two, with a couple of glasses of sherry; at four, some more beef-tea, or an equivalent; at seven, dinner or supper, with stout and port wine; and at bed-time,

stout or ale, with a chloral or morphia. This allowance I have given to patients who were said to be suffering from aggravated dyspepsia; who, I was told, had suffered from it all their lives; who had never been able to take malt liquor, or eat more than the smallest quantity at a time; who, in fact, had constantly been living on about half the quantity requisite for their support, and, through chronic starvation, had come to this depressed condition. I need hardly tell you that the patients and their friends were aghast at the quantity ordered to be taken; but improvement has taken place immediately; the tongue cleaned, the constipation given way, and the depression diminished; and I have known patients themselves become so convinced of the necessity of this augmented diet, that after recovery they have continued to take about twice as much as before the illness. How dependent these melancholic patients are upon food has often been proved. Some, when nearly well, if they were out for their drive or walk longer than usual, or from any other cause, postponed their meal, felt at once a return of the depression and delusions, which vanished again after the reception of food."

In the course of the lectures the author discusses with sufficient fulness all the points regarding the legal relations of insanity, and the duties of practitioners in regard to the important and delicate social questions which so often come up for solution in the treatment of such diseases. We have, however, given our readers an opportunity of judging of the manner in which the main branches of the subject are treated; and we must now refer them to the pages of the book itself for much valuable advice, which we cannot notice further at present. We believe that Dr. Blandford may congratulate himself on having produced a book which will be of great value to the student.

J. S.

Physics and Physiology of Spiritualism. By W. A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System in the Bellevue Hospital, Medical College, New York. Appleton and Co., 1871.

This little volume is an interesting exposition of the real nature of the so called spiritual manifestations. Being so, it is necessarily a refutation of the alleged fact of the phenomena that have really occurred being due in any way to supernatural causes or agency; where they have not been

fraudulent they have not been essentially different from similar phenomena produced by morbid action of the brain.

Dr. Hammond states with candour the evidence on which the alleged facts of spiritualism have been sought to be established, and have in so many instances been accepted and believed, and urges the insufficiency, and in many cases the utter untrustworthiness, of this evidence. To those who have yet their opinions to form on these subjects, and who bring their minds unbiassed to the perusal of this short essay, one would hope it might prove really useful in checking a too facile credence. It may be useful too in opening the eyes of those who are not willingly blinding themselves to the errors and, in many cases it cannot be doubted, deceptions of the advocates of and actors in spiritualistic doings. The whole essay contains less than a hundred pages, and is clearly and succinctly written. It opens with these words—

“There is an inherent tendency in the mind of man to ascribe to supernatural agencies those events the causes of which are beyond his knowledge; and this is especially the case with the normal and morbid phenomena which are manifested in his own person. But, as his intellect becomes more thoroughly trained, and as science advances in its developments, the range of his credulity becomes more and more circumscribed, his doubts are multiplied, and he at length reaches that condition of ‘healthy scepticism’ which allows of no belief without the proof.”

But, as the writer goes on to say—

“There always have been, and probably always will be, individuals whose love for the marvellous is so great, and whose logical powers are so small, as to render them susceptible of entertaining any belief, no matter how preposterous it may be; and others, more numerous, who, staggered by facts which they cannot understand, accept any hypothesis which may be offered as an explanation, rather than confess their ignorance.”

“The real and fraudulent phenomena of what is called Spiritualism are of such a character as to make a profound impression upon the credulous and the ignorant; and both these classes have accordingly been active in spreading the most exaggerated ideas relative to matters which are either absurdly false, or not so very astonishing when viewed by the cold light of science. Such persons have, probably, from a very early age, believed in the materiality of spirits, and having very little knowledge of the forces inherent in their own bodies, have no difficulty in ascribing occurrences which do not accord

with their experience to the agency of disembodied individuals, whom they imagine to be circulating through the world."

Dr. Hammond properly points out how little our own unaided senses can be relied on as infallible guides:—

"It is possible for the most experienced judgment to be deceived by false sensorial impressions of real objects, or by non-existing images created by the mind. In the first case, a gleam of moonlight passes for a ghost, the stump of a tree becomes a robber, and the rustling of leaves blown by the wind is imagined to be the whispering of voices. No one possesses an absolute perfection of sensation, and thus things are never seen, or heard, or smelt, or tasted, or felt exactly as they exist. In the dark, or in the uncertain light of the moon, or of artificial illumination, the liability to self-deception is very much increased; and if, in addition to the defect of light, there are continual sounds and other means of engaging the attention, it is exceedingly easy to induce sensorial confusion, and thus to impose upon the intellect."

"As regards purely imaginary images—that is, images not based on any sensorial impression—the difficulty is in the brain. An excess or deficiency of blood circulating through this organ, or a morbid alteration of its quality, such as is induced by alcohol, opium, belladonna, and other similar substances, will often lead to hallucinations."

The liability of our senses to be misled and deceived in a dim uncertain light or in darkness, ought surely to have much weight in hindering a too easy belief in wonders said to be enacted around us during a spiritual séance, where a partial darkening of the room or entire exclusion of the light is a condition stipulated for. Such an arrangement can never be admitted as affording a really fair opportunity of investigation, and it may well be doubted whether any really fair opportunity has ever yet been given. It is well known to those who have desired to be impartial observers, not rejecting willingly any sufficient proofs, and who have attended these séances in an unconverted state, for the sake of fairly investigating the phenomena produced, that very little has on those occasions ever taken place, and that little, nothing more than could have been produced by a third-rate conjurer. Usually a declaration has been made of the presence of an unbelieving element in the room, which was acting unfavourably on the spirits' manifestations. Their own people and their own place have always seemed necessary to the production of the most wonderful occurrences at spiritual séances.

Dr. Hammond's account of his own experience at a séance attended by him quite accords with what has just been said,

and he does not disguise his belief that the actors in it were practising utter deception. When mediums are wafted in the air in broad daylight, and in presence of an antagonistic element of scepticism, the unbelieving may be convinced. Some sufficiently curious and interesting account is given of alleged instances of levitation in the cases of saints in the old times, serving to show how little substantial or reliable is the evidence on which the assertion of such events has been handed down, but it would lead into too much detail to enter into a consideration of them here. The book itself is so brief and easily perused, that those who would be interested in more particulars of these instances cannot do better than refer to it.

Meanwhile, it is not without instruction to observe that in this enlightened century an exact parallel to one of our London séances may be found in the following account by Graah of a scene in Greenland on the occasion of the Angekok visiting his Esquimaux believers, which Dr. Hammond might fitly introduce into a subsequent edition:—

“The Angekok came in the evening, and the lamps being extinguished, and skins hung before the windows (for such arts, for evident reasons, are best practised in the dark), took his station on the floor, close by a well-dried sealskin there suspended, and commenced rattling it, beating the tambourine and singing, in which last he was seconded by all present. From time to time his shout was interrupted by a cry of ‘Goie, Goie, Goie, Goie, Goie, Goie!’ the meaning of which I did not comprehend, coming first from one corner of the hut and then from the other. Presently all was quiet, nothing being heard but the angekok puffing and blowing as if struggling with something superior to him in strength; and then again a sound resembling somewhat that of castanets, whereupon commenced once more the same song as before, and the same cry of ‘Goie, Goie, Goie!’ In this way a whole hour elapsed before the wizard could make the torngak, or spirit, obey his summons. Come he did, however, at last, and his approach was announced by a strange rushing sound, very like the sound of a large bird flying beneath the roof. The angekok, still chanting, now proposed his questions which were replied to in a voice quite strange to my ears; but which seemed to me to proceed from the entrance passage, near which the angekok had taken his station. These responses, however, were somewhat oracular, insomuch that Ernekek’s wives were obliged to request some more explicit answer, whereupon they received the comfortable assurance that he was alive and well, and would shortly make his appearance.”*

* Quoted by Sir J. Lubbock in “The Origin of Civilisation and Primitive Condition of Man,” p. 223.

So much with regard to the fraudulent, falsely alleged manifestations of a spiritualistic kind. There remains to be examined the real phenomena that have undoubtedly taken place, and it is in dealing with these that Dr. Hammond, while admitting their reality, would seek to prove them attributable to far other causes than those asserted by spiritual believers or impostors. He points out that they are in no-wise different from those that have occurred in states of bodily or mental disease, and which have subsided on health being restored. In short sections he discusses the subjects of somnambulism, catalepsy, and hysteria, and their wonderful and various phenomena. He adduces many instances that have come under his professional care or observation, some being hysterical persons, others highly impressionable, nervous subjects, and who had either been mentally overworked, or undergone great emotional trials, in which manifestations took place exactly parallel to those exhibited as asserted under spiritualistic influence.

With regard to hysteria, so much ignorance prevails of its varied symptoms and of the great tendency in such patients to exaggeration and to simulation, that many things easily referable by those better informed to their right causes, would, by the uninstructed, be attributed to supernatural agency.

The author gives a detailed account of a case of somnambulism which came under his own especial observation. It is certainly worth particular remark that in this case an answer to questions put to the patient while in the somnambulist state, could always be obtained; but these answers were made in accordance with a sense suggested to her, and right ones were never given by her when undirected. The case is altogether interesting enough to justify extracting the whole of it.

A young lady, of great personal attractions, had the misfortune to lose her mother by death from cholera. Several other members of the family suffered from the disease, she alone escaping, though almost worn out with fatigue, excitement, and grief. A year after these events, her father removed from the West to New York, bringing her with him and putting her at the head of his household. She had not been long in New York before she became affected with symptoms resembling those met with in cholera. The muscles of the face were in almost constant action; and though she had not altogether lost the power to control them by her will, it was difficult at times for her to do so. She soon began to talk in her sleep, and finally was found one night by her father, as he came home, endeavouring to open the

street door. She was then, as he said, sound asleep, and had to be violently shaken to be aroused. After this, she made the attempt every night to get out of bed, but was generally prevented by a nurse who slept in the same room with her, and who was awakened by the noise she made. Her father now consulted me in regard to the case, and invited me to the house in order to witness the somnambulic acts for myself. One night, therefore, I went to his residence, and waited for the expected manifestations. The nurse had received orders not to interfere with her charge on this occasion, unless it was evident that injury would result, and to notify us of the beginning of the performance.

About twelve o'clock she came downstairs and informed us that the young lady had risen from her bed, and was about to dress herself. I went upstairs, accompanied by her father, and met her in the upper hall partly dressed. She was walking very slowly and deliberately, her head elevated, her eyes open, and her hands hanging loosely by her side. We stood aside to let her pass. Without noticing us, she descended the stairs to the parlour, we following her. Taking a match, which she had brought with her from her own room, she rubbed it several times on the under side of the mantelpiece, until it caught fire, and then, turning on the gas, lit it. She next threw herself into an arm-chair, and looked fixedly at a portrait of her mother which hung over the mantelpiece. While she was in this position, I carefully examined her countenance, and performed several experiments, with the view of ascertaining the condition of the senses as to activity.

She was very pale, more so than was natural to her; her eyes were wide open, and did not wink when the hand was brought suddenly in close proximity to them; the muscles of the face, which, when she was awake, were almost constantly in action, were now perfectly still; her pulse was regular in rhythm and force, and beat eighty-two per minute, and the respiration was uniform and slow.

I held a large book between her eyes and the picture she was apparently looking at, so that she could not see it. She nevertheless continued to gaze in the same direction, as if no obstacle were interposed. I then made several motions, as if about to strike her in the face. She made no attempt to ward off the blows, nor did she give the slightest sign that she saw my actions. I touched the corner of each eye with a lead pencil I had in my hand; but even this did not make her close her eyelids. I was entirely satisfied that she did not see, at least with her eyes.

I held a lighted sulphur match under her nose, so that she could not avoid inhaling the sulphurous acid gas which escaped. She gave no evidence of feeling any irritation. Cologne, and other perfumes, and smelling salts, likewise failed to make any obvious impression on her olfactory nerves.

Through her partially opened mouth I introduced a piece of bread,

soaked in lemon juice. She evidently failed to perceive the sour taste. Another piece of bread saturated with a solution of quinine was ineffectual. The two pieces remained in her mouth a full minute, and were then chewed and swallowed.

She now arose from her chair and began to pace the room in an agitated manner; she wrung her hands, sobbed, and wept violently. While she was acting in this way, I struck two books together several times so as to make loud noises close to her ears. This failed to interrupt her.

I then took her by the hand and led her back to the chair in which she had previously been sitting. She made no resistance, but sat down quietly, and soon became perfectly calm.

Scratching the back of her hand with a pin, pulling her hair, and pinching her face, appeared to excite no sensation.

I then took off her slippers and tickled the soles of her feet. She at once drew them away, but no laughter was produced. As often as this experiment was repeated the feet were drawn up. The spinal cord was therefore awake.

She had now been downstairs about twenty minutes. Desiring to awake her, I shook her by the shoulders quite violently for several seconds without success. I then took her head between my hands and shook it. This proved effectual in a little while. She awoke suddenly, looked around her for an instant, as if endeavouring to comprehend her situation, and then burst into a fit of hysterical sobbing. When she recovered her equanimity she had no recollection of anything that had passed, or of having had a dream of any kind.

A short time after writing the account of the young lady whose case has just been quoted as an example of natural somnambulism, I was informed by her father that her affection, which had been cured by suitable medical treatment, had returned, owing, as he supposed, to excessive mental exertion, she having contracted a taste for philosophy, in the study of which she had indulged to a great extent.

Upon examination I found that she not only had paroxysms of natural somnambulism, but that she had acquired the power of inducing the hypnotic state at will. Her process was to take up some one of the philosophical works she was in the habit of studying, select a paragraph which required intense thought, or excited powerful emotion, read it, close the book, fix her eyes steadily, but not directing the foci so as to see any particular object, and then reflect deeply upon what she had read. From the reverie thus occasioned she gradually passed into the somnambulatory condition. During this state it was said she answered questions correctly, read books held behind her, described scenes passing in distant places, and communicated messages from the dead. She therefore possessed, in every essential respect, the qualification of either a *clairvoyant* or a spiritualistic medium, according to the peculiar tenets of belief held by the faithful.

In accordance with my request, she proceeded to put herself into

the hypnotic state. With a volume of Plato in her hand, she read thus from the *Apology of Socrates*. Her voice was calm and impressive, as though she felt every word she uttered :—

“Moreover, we may hence conclude that there is great hope that death is a blessing ; for to die is one of two things ; for either the dead may be annihilated and have no sensation of anything whatever, or, as it is said, there is a certain change and passage of the soul from one place to another. And if it is a privation of all sensation, as it were, a sleep in which the sleeper has no dream, death would be a wonderful gain. For I think that if any one, having selected a night in which he slept so soundly as not to have had a dream, and having compared this night with all the other nights and days of his life, should be required on consideration to say how many days and nights he had passed better and more pleasantly than this night throughout his life. I think that not only a private person, but even the great king himself, would find them easy to number in comparison with other days and nights. If, therefore, death is a thing of this kind, I say it is a gain, for thus all futurity appears to be nothing more than one night.”

As she reached the close her voice became inexpressibly sad, the book dropped from her hand, her eyes were fixed on vacancy, her hands lay quietly in her lap, her breath came irregularly, and tears were flowing down her cheeks. Her pulse, which before she began to read was 84 per minute, was now 108. As her abstraction became more profound it fell, till, when she was unconscious, three minutes after she ceased reading, it was only 72.

To satisfy myself that she was completely hypnotized, I held a bottle of strong aqua ammonia to her nostrils. She did not evince the slightest degree of sensibility. Touching the eye with the finger—a test that a person practising deception could not have borne—equally failed to afford the least response indicative of sensation. I was, therefore, satisfied that she was in a condition of artificial somnambulism.

To describe in detail all that took place would lengthen unduly this paper ; such parts, therefore, as are material, and which illustrate essential points, will alone be given.

The writer asked her if there were any spirits in the room.

“Yes.”

“Whose spirits are they?”

“The spirit of Socrates is here, the spirit of Plato, the spirit of Schleiermacher.” (She had been reading before my arrival “*Schleiermacher's Introductions to the Dialogues of Plato*.”)

“Do you not also see the spirit of Schenkelfürst?”

This was a *ruse*, there being no such person.

“Schenkelfürst?” she asked.

“Yes; he was Schleiermacher's constant companion and friend.”

“Schenkelfürst,” she repeated; “what a singular name!”

She was silent for a moment, and then her face was lit up with a smile, and she exclaimed—

"I see him; he is a small, dark man, with sharp, piercing eyes; he wears a coat trimmed with fur; he approaches Schleiermacher; they embrace; they are talking to each other."

"Will not Schleiermacher send some message through you?"

"No; he has gone away with his friend."

"Will no other spirit communicate?"

"Yes, there is one coming now; a man with a mournful face; his name is Bruno-Giordano Bruno. He speaks; he says, "O my friends, be of good cheer; there is no end, even as there has been no beginning; the weak-hearted fall from the ranks, and, for a time, are lost; but as there is a portion of the divinity in all God's creatures, even they are regenerated."

She stopped, and then in a low voice said, while the tears streamed down her cheeks:—

"Majori forsitan cum timore sententiam in me ferri quam ego accipiam,"—the words used by Bruno when sentence of death was pronounced upon him. She had finished reading his life a few weeks before.

Desiring to change the current of her thoughts, and also to test her powers of prevision, she was asked who would be the first patient to enter the office of the writer that day week, and with what disease would he or she be affected?

She answered promptly:—

"A gentleman from Albany, I see him now; thin and pale, and very weak; he is lame, I think he is paralyzed."

The first person in reality who entered the office on the day in question was a lady of New York, suffering from nervous headache.

She was then asked where her father was at that moment (4.10 p.m.) Her answer was: "At the corner of Wall-street and Broadway; he is looking at the clock on Trinity church; he is waiting for a stage." During the hour between four and five o'clock her father was at Brooklyn.

A table with paper was now placed before her, a pencil put into her hand, and she was requested again to place herself *en rapport* in the same spirit. She immediately began to write as follows; "Let all the world hear my voice, and follow the precepts I inculcate. There are many fools and but few wise. I write for the former, and am probably a fool myself, for I constantly see a chasm yawning at my side; and though my intellect tells me there is no chasm near me, I place a screen so that I cannot see it. Pascal."

She had that very day been reading a memoir of Pascal, in which the hallucination referred to was mentioned.

The following conversation then took place:—

"Where are you now?"

"In New York."

"No, you are in a vessel at sea; there is a terrible storm; are you not afraid?"

"Yes, I am very much frightened; what shall I do? Oh, save me, save me!"

She wrung her hands, screamed with terror, rose from her chair and paced the room, apparently suffering intensely from fear. In the midst of her agitation she awoke, and it was not without difficulty that the impression she had received could be removed.

On a subsequent occasion her somnambulist powers of vision were tested by asking her to read the writing on a slip of paper; to tell the time marked by a watch held to the back of her head; to read a particular line from a closed book, etc.; but, though she always made some answer, she was never once right. The senses of touch and of hearing were the only ones she appeared to be capable of exercising, and these were not in any degree exalted in their action. Conjoined with integrity of touch there was well-marked *analgesia*, or inability to feel pain. Thus, though able to tell the shape, texture, and consistence of objects placed in her hands, she experienced no sensation when a pin was thrust into the calf of her leg, or when a coal of fire was held in close proximity to any part of her body.

It will readily be perceived, therefore, that certain parts of her nervous system were in a state of inaction, were, in fact, dormant, while others remained capable of receiving sensations and originating nervous influence. Her sleep was therefore incomplete. Images were formed, hallucinations entertained, and she was accordingly in these respects in a condition similar to that of a dreaming person; for the images and hallucinations were either directly connected with thoughts she had previously had, or were immediately suggested to her through her sense of hearing. Some mental faculties were exercised, while others were quiescent. There was no correct judgment and no volition. Imagination, memory, the emotions, and *the ability to be impressed by suggestions*, were present in a high degree.

It would appear incontrovertible that nothing has been achieved in spiritualistic manifestations that has not its counterpart to be found in morbid states: in disease, but not in health. Therefore, to induce such manifestations is not simply harmless and useless, but to be seriously deprecated as exciting mischievous, morbid action, and producing a state of disease that may not pass away, but is liable to have injurious effects, and leave its lasting trace upon a nervous or hysterical subject. Surely not lightly and without consideration should men of name and weight give the strength of their advocacy, or even shadow of their countenance, to what may be egregious error, or, still worse, an impudent imposture. It is right that these things should be duly investigated by those who bring the knowledge and balance of mind requisite for efficiently doing so to the examination of them. But for many it is but dangerous ground leading on to doubt and discomfort, if not to erroneous belief. Those who do not feel justified in thoroughly rejecting and dismissing

from their minds these subjects, may surely profitably reflect how utterly barren of all good result, or the accomplishment of any one good work, have been these spiritualistic manifestations, and how little probable it is that the Ruler of all Spirits would permit the visitation of those that have departed, merely to enact the most unmeaning and useless comedies.

A. C. M.

Hamlet; from a Psychological Point of View. By W. DYSON WOOD, Assistant-Surgeon to the West Riding Prison at Wakefield.

Mr. Dyson Wood has printed, as a pamphlet, a lecture which he delivered on Hamlet at Wakefield. He has treated, in a philosophical manner, a character which has been, and probably will continue to be, provocative of much philosophical reflection. That there has not been much original reflection to add will hardly be a matter of surprise to those who are familiar with the criticisms of Schlegel, Goethe, and Gervinus. But he has not failed to produce an instructive and well-written essay. The following extract embodies his conclusion, and will serve as an illustration of his style :—

“As I have said before, a consistent theory of the evolution of this play is to be found in an examination of Hamlet’s character and the circumstances in which he was placed. Hamlet is pictured to us as a young man possessing highly sensitive and emotional qualities of mind, in combination with most refined intellectual insight and subtlety, original reasoning power of a high order, exalted, and at the same time softened, by a brilliant and most delicate imagination; and yet, judged critically, these splendid powers of mind do not appear in their perfectly developed form—they seem to be beautiful young buds rather than fully expanded flowers. Whatever notes he touches, he touches brilliantly, and yet lightly as with the finger of genius, but his songs are more like exquisite snatches of melody than the music of completed conceptions. His noble mind, tentative in its efforts, seems to be waiting and yearning for some favourable soil in which it may germinate, and for problems of thought and policy worthy of its greatness. Hamlet, I think, is deeply interesting to us, not only for his rare exhibitions of mental resources already vouchsafed to us, but also by suggesting the immense reserve force lying, as it were, latent, or partially developed, in the background, waiting only for favourable matter and opportunity on which to exercise itself. It is stimulating to reflect

into what a giant he might have grown had his lot been cast in a fair and open field, say in the world of literature or politics. It is true that he appears to us in the play as a man almost solely of speculative and reflective ability, and certainly weak in capacity for action; but this does not necessarily involve our looking upon him merely as a dreamy, brooding egoist, unfitted by his very nature for ever battling with the realities of applied thought and practical life. We see him in that stage of development through which minds of a certain high class invariably pass—the stage of what has been called ‘reflective indecision’—before the conceptions are systematized, before the will has been fashioned, and before the individual has placed himself thinkingly, and, as far as he can, actually, in harmony with the circumstances by which he is surrounded. The will, in so far as it is the instrument and servant of reason, and not merely another name for unreasoning impulse, is not innate, is not a necessary part of our constitution from birth, but is gradually formed and built up as the result of natural development and constantly repeated efforts; until the will is thoroughly fashioned and acts almost unconsciously and involuntarily, the character cannot be said to be complete, and, judged by this criterion, Hamlet’s is incomplete, his individuality is not perfect. I prefer to regard him myself as a splendid specimen of humanity, full of promise, but arrested in his development, and that too in the very blossoming of his powers; called to a career and placed among circumstances for which he was utterly unfit, driven through want of healthier outlets for his activity to brooding self-consciousness, the victim at last of melancholy and despair. In thinking of Hamlet and his destiny, the sad words of Ophelia come naturally to our lips, ‘What a noble mind is here o’erthrown!’”

PART III.—QUARTERLY REPORT ON THE PROGRESS OF PSYCHOLOGICAL MEDICINE.

I. American Psychological Literature.

By PATRICK NICOL, M.B. Aberdeen.

American Journal of Insanity, vol. xxv. July, 1868, to April, 1869.

October, 1868. No. II.—“Insanity and its Relations to Medicine” by John Gray, M.D., &c. “History and Philosophy of Medical Jurisprudence,” by John Ordronaux, Professor of Medical Jurisprudence in Columbia College. “Last Wills—Unsound Mind and Memory.” “A Lecture on Gastric Epilepsy,” by G. E. Paget, M.D. “Case of Compound Fracture of the Skull, with Recovery,” by Edwin Hutchinson, M.D. BIBLIOGRAPHICAL: English Psychological Liter-

ature. *Summary*: Obituary; "Epileptiform Convulsions, following a Blow on the Head;" "Case of Epilepsy connected with Vesical Calculus, cured by Lithotomy." "Thinking, Doing, Feeling."

January, 1869. No. III.—"Notes of a Visit to some of the Principal Hospitals for the Insane in Great Britain, France, and Germany, with Observations on the Use of Mechanical Restraint in the Treatment of the Insane," by A. Kellogg, M.D. "Ch. Bouchard on Secondary Degeneration of the Spinal Cord;" with an Introduction by E. R. Hurn, M.D. Clinical Cases—Case I. "Apoplexy in a Boy of Fifteen Years." Case II. "Bright's Disease;" by Judson Andrews, M.D. BIBLIOGRAPHICAL: "Reports of Lunatic Asylums." "Valedictory Address delivered before the Graduate Class of the National Medical College," by John Ordronaux, M.D., LL.B., &c. *Summary*: "Medical Notes on the Island of Jamaica." "Hudson River Insane Hospital." Obituary. "Burning of the Ohio State Lunatic Asylum."

April, 1869. No. IV.—"Ch. Bouchard on Secondary Degenerations of the Spinal Cord." "Observations on a Form of Nervous Prostration (Neurasthenia) culminating in Insanity," by E. H. Van Deusen, Medical Superintendent of the Michigan Asylum for the Insane." "The late Professor Griesinger." BIBLIOGRAPHICAL: Reports of English Asylums; English Dietary System in County Asylums. *Summary*: A Medico-Legal Case of Injury to the Nervous System. Loss of the Greater Part of the Vault of the Cranium: Recovery. Colloid of the Brain. The Gynaecological Society of Boston. Association of Medical Superintendents of Institutions for the Insane.

Vol. xxvi. July, 1869, to April, 1870.

July, 1869. No. I.—"Mania Transitoria" by Edward Jarvis, M.D. "Insanity of the Religious Emotional Type, and its occasional Physical Relations," by Joseph Workman, M.D. "A Project of a System of Statistics applicable to the Study of Mental Diseases, approved by the International Congress of Alienists of 1867, with Report and Explanation of the Objects." BIBLIOGRAPHICAL: "Reports of American Insane Asylums." *Summary*: "On Muric acid as a Remedy for some Nervous Disorders." "On Mental Nervous Action." "Connection of Herpes with Lesions of the Nerve Trunks." "Willard Asylum for Chronic Insane, at Ovid, Seneca Co., N. Y." "Twenty-third Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane." "New State Lunatic Asylum for Western New York."

October, 1869. No. II.—"The Physiological Action and Therapeutic Uses of the Acidum Phosphoricum Dilutum," by Judson B. Andrews, Assistant Physician in the New York Lunatic Asylum. "The Twenty-third Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane." "Illinois Legislation regarding Hospitals for the Insane." BIBLIOGRAPHICAL: "New South Wales Report on Asylums," by Frederic Norton Manning, M.D. "The Biennial Retrospect of Medicine and Surgery for 1867-8." "The Jurisprudence of Medicine, in its Relation to the Law of Contracts, Torts, and Evidence," &c., by John Ordronaux, LL.B., M.D., Professor of Medical Jurisprudence in the Law School of Columbia College. "New State Lunatic Asylum in Pennsylvania."

January, 1870. No. III.—"Does Maternal Mental Influence have any Constructive or Destructive Power in the Production of Malformations or Monstrosities at any Stage of Embryonic Developments?" by G. Fisher, M.D. "Capax or Incapax." "The Pulse of the Insane," by Edward R. Hun, M.D., &c. "Habeas Corpus and Lunacy; Decision of Judge Ludlow." BIBLIOGRAPHICAL: "Reports of Hospitals for the Insane, for 1868, continued." "Address delivered before the Medical Society of the State of Pennsylvania at its Annual Session, June, 1869," by John Curwen, M.D., President. "Pepsin, its Physiological and Therapeutical Actions," by J. S. Hawley, M.D. "On the Detection of White and Red Corpuscles in Blood Stains," by Joseph G. Richardson, M.D., &c. "A Contribution to the Therapeutics of Acute Rheumatism, based on a Series of Cases treated with Bromide of Ammonium," by J. M. Da Costa, M.D. "Trichina

Spiralis," by E. R. Hun, M.D. "Second Annual Report of the Board of State Commissioners of Public Charities of the State of New York; to which is appended the Report of the Secretary of the Board." "The Pathology of Bright's Disease," by Wm. B. Lewis, M.D., &c. "Vesico-Vaginal Fistule, and its successful Treatment by the Button Suture," by Nathan Bozeman, M.D. "Last Illness of Dr. Alden-March. A Criticism on the Management of his Case," by Charles A. Robertson, A.M., M.D. "Biographical Sketch of the late A. B. Shipman, M.D." *Summary*: "The New Hudson River Hospital." "Pathological Stereographs."

April, 1870. No. IV.—"Trial of Samuel M. Andrews for the Murder of Cornelius Holmes," by Edward Jarvis, M.D. "Clinical Teaching and Pathological Investigations in Insanity." "Address Delivered at the Laying of the Corner Stone of the State Hospital for the Insane at Danville, Penn., August 26, 1869," by Benjamin W. Richardson, M.D., F.R.S. "A Memoir of John Conolly, M.D., D.C.L., comprising a Sketch of the Treatment of the Insane in Europe and America," by Sir James Clark, Bart., K.C.B., M.D., F.R.S., &c. "New York State Asylums." *Summary*: "Case of Acute Mania successfully treated with Hydrate of Chloral." "Meeting of the Association of Superintendents."

"*Insanity and its Relations to Medicine.*"—This paper has for its object the proving of the department of mental disease, "inseparable from general medical science," and is therefore in harmony with the tendency of general alienist opinion at the present day. The paper commences with a sketch of the history of insanity, and of its treatment, which, among other matters, contains a claim for America of an independent origination of the philanthropic system in treating the insane; but it is confessed that, even so long ago as among the ancient Egyptians, a similar mode of treatment was carried out. The writer goes on to claim for the medical profession the source of all the amelioration that has ever taken place in the treatment of those mentally deranged, supporting his conclusions by reference to the history of lunacy. He is proportionately severe on philosophers and religionists, both of whom have rather shrunk from practical dealing with the question; but he does not enter on the discussion of the "previous question," raised by the fact, which he himself affirms, that they have both "stigmatised the disease as degrading." If this last be really the case, there remains, of course, to medical men, a very important part of their function still to be performed, viz., that of doing what they can towards finding the causes of the evil, and striking at its roots. Probably in the present day there would be much less reason for all classes of the community to cry out against alienist physicians, were these two ends kept distinctly in view by them, viz., to take all due care of the poor people who, by the misfortunes or faults of their forefathers, or their circumstances, have already fallen victims to the evil of insanity; and, in the second place, so to investigate the causes of its spread, that similar preventive measures may be taken to those which are doing so much good in controlling epidemic disease in our large towns at present. The only ground upon which such preventive measures can be firmly based is that of a thorough knowledge of the laws of sensation in insanity, such as may surely be acquired by asylum medical officers, with the opportunities they have, if they apply

themselves to the thoroughly scientific investigation of the cases under their charge.

Though not with the end of prevention expressly stated, the necessity for study of this description is ably urged, not only on asylum physicians, but on the whole profession, by the author of the paper under review. And still further practical hints are given as to the formation of a regular course of instruction in insanity; the resources that a lecturer on the subject would have to fall back upon are summarised. Much encouragement is drawn from the modern physical theory of insanity, and very justly so, for if the lesion in a specific case is within the body there is much more chance of human means ultimately discovering it than were it a part of the subjective life of the patient. Only the most coarse application of this theory is, however, made in this paper; that, viz., by which we are taught to look for lesions of such organs as lungs, liver, vessels, &c., and by which the finer changes in the nerve-tissue, which are, it is true, as yet far beyond the reach of our means of certain investigation, are quite lost sight of. To proclaim that in any case of insanity careful *post-mortem* investigation will at the present day invariably discover some lesion of moment, is to lead to the disappointment of the inquirers and the ridicule of scientific men generally. But of what we can see we ought to make the most, and the writer of this paper does good service in encouraging us towards this end.

Gastric Epilepsy.—This paper is very instructive. Dr. Paget points out that epileptic fits are not at all dependent on one, or one sort, of (remote) cause; that, on the contrary, each patient's case must be considered by itself, and the circumstances likely to produce the disease noted. At the same time he admits that some general facts are known, for instance, the existence of an *epileptic diathesis*, the power of a local irritation to produce epileptic fits, &c. He gives a number of illustrative cases, in which correction of the digestive organs effected improvement or cure, and adds one or two cases of epilepsy not of gastric origin.

Notes of a Visit to some of the Principal Hospitals for the Insane in Great Britain, France, and Germany.—These notes read very pleasantly. The spirit of the criticism is throughout frank. One wonders at finding (near the beginning of the paper) frequent expressions of admiration with regard to the laying out of the airing courts in the British Asylums visited, for it would naturally be expected that any one coming from the luxuriant vegetation of the States would find any efforts that can be made in Britain towards pleasing the eye with verdure only very moderately successful.

What seems to have struck most the critic, in the large British asylums visited, was the imperfection of the classification; "twelve divisions," are what he thinks appropriate. "The quiet and noisy, the neat and slovenly, the violent and peaceable, the modest and the obscene, are much more promiscuously mixed up than with us, and

strange to say, they here claim it as an advantage; a doctrine that most of our convalescent, and quiet, but moderately demented patients, would hardly subscribe to, however high the medical authority given in support of it."

The hospital wards in the various houses seen, call forth the admiration of the writer, and these along with such remarks as that concerning the furnishing of pictures and clocks "*even to the most disturbed*" wards, suggests a state of things in American asylums, the thought of which may perhaps be some consolation for the inuendoes suggested by sundry features of British asylums, such as our boasted freedom from mechanical restraint. The passage in which the last-mentioned subject is broached, though no doubt animated too much by an American repugnance to anything enforced by respect for the goodwill of "the Visiting Commissioners," still will no doubt remain characteristic of a good deal that exists in British Asylum Lunacy of the present day. The paragraphs on the same topic, with which the paper closes, are anything but flattering either to the judgment or to the honesty of British physicians to the insane. The writer describes himself as pained to see to what an extent their conduct is guided by "restrictions thrown about them by public sentiment, and by the watchfulness of commissioners in regard to mechanical restraint, and the expedients they were forced to resort to in the management of their most trying cases without it." In an earlier part of the paper the question is opened to what extent the retention of their offices and salaries, as opposed to the dictates of their consciences, influences asylum medical officers towards this subservience.

It is hardly in place here to show how, and how extensively, such statements should be modified in order to meet the actual facts of the case; to set forth where in the attitude of Asylum officers to the Commissioners fear ends and respect begins, or how far in the reports of the latter it is evidently attempted rather to lead the spirit of the age than to drive its obstinacy. Nor need it be attempted here to meet at length the bold statements in which the superior agreeableness and advantage of restraint to the patients are affirmed. The confinement exercised by four walls is only a degree of that which every one is more or less accustomed to; the confinement by bonds is a violent change to almost any civilized human being out of babyhood; and that the latter is a felt degradation, that most lunatics moreover are capable of entertaining the feeling of degradation and suffering all its depressing consequences, are facts long since brought forward, and too long left unchallenged not to have much weight. From a therapeutical point of view the argument is still easier; to suppress a diseased process is the worst way to set about finding out its cause and relations; and these remain for us to be found out, if ever we would treat the condition of excitement on rational therapeutical grounds. At the same time, in certain surgical cases, and in some cases where the patient has sunk himself by his habits almost beneath the possibility of de-

gradation (habitual masturbators, exposures of their persons, &c.), the question of restraint may profitably remain an open one; neither is it intended here to defend singly or collectively the measures used at the present day in England to do away with the necessity of restraint. The evil has offended the sense of the more impressionable men among us; it must be some time before the activity of the more energetic members of the profession is so enlisted in the cause, that means shall be attained to grapple with these states of excitement in their very earliest and least annoying stages, and to lull them, or to divert them into different channels.

Passing over the translation of "Bouchard on the Spinal cord," the two clinical cases recorded in this number attract attention by their real worth. The first, which, as being the more rare, may be summarized here, is one of insanity following typhoid fever, after an interval marked by decided change of disposition from obliging to mischievous. One morning, as the subject of the attack, a boy, aged 15, was, after having been some months in the asylum, commencing for the first time to work, headache and pain in the belly came on, followed rapidly by mania of two hours' duration, by an interval of insensibility, with blanching of the lips and face, and finally by death the same afternoon. At the autopsy there were found extensive hæmorrhagic effusion in arachnoid sac, and degeneration of the coats of the small vessels of the brain. "May it not have been," the author asks, "that in the morning there was a slight effusion from the meningeal vessels, which would account for the convulsion, followed temporarily by maniacal symptoms, and that the large effusion was so suddenly poured out, that it instantly destroyed life, thus realizing to its full extent the proper meaning of the term of apoplexy?" Another solution might be proposed; for effusion, slight or severe, can hardly be looked on as a likely cause of mania, though it may be found now and then in a case of this sort. The mania might have sprung from such a cause as the emotions or exertions connected with the desire to work in the necessarily impaired state of the hemispherical neurine. There is no doubt that mania is often—some say always—accompanied with determination of blood to the head; under the increased pressure the weakened vessels would give way, and a spontaneous blood letting take place. Following this, might well be supposed likely to come a relaxation of the severe symptoms, which would have its limit on the one hand in the arrival of coma from the pressure by effused blood on the brain; on the other hand, in the failure of nerve power consequent on the absence of the blood from its natural channels; both these limits being the next stage to death.

Observations on a Form of Nervous Prostration (Neurasthenia) culminating in Insanity.—It is with the title of this paper that most fault may be found; the observations are not on a form of neurasthenia, but rather on neurasthenia in general, terminating in insanity. This being understood, the paper does good service by pointing out

what is not yet independent of demonstration, how many sorts of insanity commence with diminished healthiness of nerve tissue. As is often the case, a number of affections, some evidently neurasthenic, others only presumably so, are mixed up together in this paper. When much power has been expended, and symptoms of laxity in the exercise of function begin to show, we may legitimately infer that want of power (*i.e.*, want in the nerve tissue of certain ingredients which are invariably concerned in the processes preceding a display of energy) is the condition of the nervous system; but when there has been little nerve waste—when the lesion follows in diminished rather than excessive stimulus to the nervous centres, one may be excused for thinking that the diseased processes are of a different sort. Want of exercise must tell in a different way from over exercise, both in and out of the nervous system.

The depicting of one sort of case of want of due exercise for the nervous system is so graphically executed that it may be quoted here; it is possibly typical of a good many cases that come under notice, though the causes at work are probably not by any means of a simple nature.

“The early married life of the wives of some of our smaller farmers seems especially calculated to predispose to this condition. Transferred to an isolated farm house, very frequently from a home in which she had enjoyed a requisite measure of social and intellectual recreation, she is subjected to a daily routine of very monotonous household labour. Her new *home*, if it deserve the name, is by a strict utilitarianism, deprived of everything which can suggest a pleasant thought: not a flower blooms in the garden; books she has, perhaps, but no time to read them. Remote from neighbours, as in sparsely settled districts, for weeks together she sees only her husband and the generally uneducated man who shares his toil.

“The urgency of farm work necessitates hurried, unsocial meals, and as night closes in, wearied with his exertions, the farmer is often accustomed to seek his bed at an early hour, leaving his wife to pass the long and lonely evening with her needle. Whilst the disposal of his crops and the constant changes in the character of farm labour afford her husband sufficient variety and recreation, her daily life, and especially if she have also the unaided care of one or two ailing little children, is exhausting and depressing to a degree of which but few are likely to form any correct conception. From this class come many applications for the admission of female patients.”

The affinity of neurasthenic mental derangements with neuralgia is well pointed out, as well as its close relation to the insanity caused at times by malaria. The symptoms are enumerated; in a general way they may be said to bear much the same relation to the ordinary (sthenic and asthenic) types of insanity that the nervous form of, *e. g.* inflammatory, fever does to the ordinary form. The treatment of the affection is divided into moral and physical; under the former head

exercise and recreative occupation are placed ; under the latter general means, such as warm beds, sponge bathing, good diet (appropriate to the condition of the stomach), with a little stimulants ; and special drugs. The latter are individually well rendered account of ; quinine ranks first with the writer, only contra-indicated by cerebral hyperæmia ; arsenic is ranked as a nerve nutrient, and is indicated often by harsh abnormal states of the skin ; strychnine is recommended in cases of muscular atonicity ; iron has been found of little positive service ; phosphorus has not merited repeated administration.

Mania Transitoria, by Edward Jarvis, M.D.—This paper is of the nature of a compilation from various sources,—almost the only method to be followed with advantage in such a subject where so few cases ever happen to each observer,—and the arrangement of the material is certainly very able. The whole goes to show the reality of sudden attacks of “mania” often homicidal, converting responsible beings for the time into irresponsible slaves of a diseased mind. The existence of a hereditary taint in many such cases is pointed out, while in others, according to some of the quoted authors’ statements, there was more brooding over the misdeed for some time previously than appeared on the face of things.

Religious-Emotional Insanity.—Dr. Joseph Workman in this paper points out the relation that this affection has to disease of the sexual organs ; this is indicated by the words of the maniac more or less, and also by his or her movements, which easily show the erotic tendency. The explanation of this singular conjunction given here is not satisfactory, if it may be deemed an explanation at all. “If man differs from all the rest of created beings, by the possession of a rational soul, capable of apprehending and enjoying God, and of bringing under subjection those lusts and passions which govern the brutes, why should it appear inconsistent with the Divine wisdom that an intimate relation should have been established between his religious capacity and the procreative organisation ordained to be its subservient ?” Now the question is not one of Divine wisdom, or the opposite ; no man, probably, unless he disputes the existence of a God, denies an All-seeing wisdom working among all earthly circumstances ; the question ought rather to be, by what particular psychical arrangement these two faculties (of religious emotion and of reproductive eagerness) have been placed in so close affinity to one another.

The remarks made on the connection of masturbation with the religious-emotional type of insanity are, therefore, much more to the point. The author of the paper merely indicates such a relation, without affirming that self-abuse is the cause of the insanity ; and this is wise, for it seems much more probable that the two are effects of a common cause, residing in the constitution of the individual.

The Physiological Action and Therapeutical uses of “Acidum Phosphoricum dilutum.”—This paper, though furnishing many valu-

able facts, reposes in great measure, as regards its innate strength, upon one of those processes of reasoning which always run great risk of bringing the *à priori* method into disrepute as applied to therapeutics. Phosphorus is an important element in the nerve tissue, and phosphates are eliminated in greater quantity than usual while this tissue is being severely exercised; therefore, one would think doses of phosphorus might be given with much advantage in cases of debility insanity, and accompanied with nerve waste. That it is given with advantage, it is the object of this paper to show; cases are narrated for this purpose; but a good deal is left to the *à priori* argument. Now we know as regards the nutrition of the body at least this law, that it goes on much better when a mixed diet is supplied than when simple articles such as albumen, or even such foods as bread, meats, &c., are given alone. It would seem as if the healthiest assimilation for the body were that where all the tissues are employed together each in appropriating its peculiar nutriment. To try to favour one and stint the others is the way to throw the whole out of order. Moreover, the best initiation of the process is from the organic chemical compounds; it would seem that they break up in that sort of way, as they pass on through the different capillaries and cells which most favour the assimilation by unsupplied parts of the residuum from each appropriation. There is no reason to think, from what experiments in this direction can be instituted, that a mere mechanical mixture of the elements of nutrient food would in the slightest degree subserve the purposes of nutrition. There is, therefore, much more necessary than that the ingredients of a decaying tissue should be supplied, for its renovation to be accomplished. So carefully adjusted are the bodily processes that there is generally more good to be done even to a local instance of malnutrition, by a liberal diet of natural food from which the bodily processes are allowed in their way to pick up the parts appropriate for the backward organ, than by an artificial diet, or by drugging, with a view to supply the material for reconstruction. The application of these remarks to the case of an attempt to supply weakened nerve tissues with phosphorus, is evident. Even if the results are beneficial in individual cases, it does not at once follow that the benefit is got in the way suggested by theory.

In the paper under review, the *à posteriori* evidence is so strong, that it must be allowed considerable weight. Among other cases, two of dementia following on acute mania are given, wherein the administration of doses of dilute phosphoric acid, varying from ten to thirty minims, three times a day, was accompanied by recovery. The sphygmographic tracings from the pulses of several subjects of its action, both healthy, and mentally diseased, are given, and indicate undoubtedly increased force and steadiness in the arterial beat. The experience of those competent to judge, who have used it as a remedy in case of nervous fatigue following severe mental exertion, is certainly in its

favour. Altogether, the dilute phosphoric acid would seem, from the facts stated in this paper, to be well worth a trial in cases of the sort indicated.

Twenty-third Annual Meeting of the American Medical Superintendents of Asylums' Association.—Some interesting discussions took place in this meeting. Among others was one connected with the propriety of chaplains being attached to all Asylums. No doubt was expressed by any of the numerous speakers of the good that could be effected by judiciously conducted services; it was insisted on, however, by many, that want of judgment in the selection of subjects and manner of discourse might prove highly injurious, and that the Medical Superintendent ought to have a great, or the whole share in the choice of this officer.

A paper by Dr. Workman, of the Toronto Asylum, on "Insanity of the Religious Emotional Type" (which has been already adverted to), excited a lively discussion. The fact of a striking connection of the sort indicated, between the generative organs and the centres of religious emotion, was acknowledged by most of the members; at the same time it was strongly denied by many that all cases of the religious emotional sort are affected with lesion in the several organs; and the propriety of referring the origin of insanity in women in almost every case to these organs was generally negatived.

A paper, by Dr. Ray, of the Philadelphia Asylum, on "Certain Abnormal Conditions of the Mind," indefinite as is its title, had a tolerably definite end, viz., of showing and illustrating the fact that persons may, in a remission, or at the commencement of an attack of insanity, or of a severe bodily illness, perform a series of apparently rational actions, of which, on making permanent recovery, they have not the slightest recollection, and for which they are not responsible. The matter was discussed *pro* and *con.*; the affirmation that the knowledge of such a possibility could not be of any assistance in an actual case, unless accompanied with such collateral evidence of insanity as would set the matter at rest of itself, carried a good deal of weight with it. The question of the amount of recollection of their extravagant actions possessed by maniacs after the paroxysm is over, was opened; the fact that some have good, and even acute memory as regards everything that happens to them, was affirmed, and must be well known to every close observer. Undoubtedly, in every point of view, psychological, therapeutical, and medico-legal, this last-mentioned question is a very important and interesting one.

Does Maternal Mental Influence have any Constructive or Destructive Power in the Production of Malformations or Monstrosities at any Stage of Embryonic Development?—In an early sentence of this paper, the author stigmatizes the belief in the truth of an affirmative answer to the above question as a piece of superstition remaining to us still from the clouds of the middle ages, and he proceeds confidently to the removal of the moles which, in this regard, obscure the eyes of his professional

brethren. Having secured a number of fanciful cases of alleged resemblances, and of cases put on record by medical men as curiosities in this department, and as coming in relation with the question above named (though not as by any means foreclosing it), and having erected a formidable array of these between his present position and the wished for end, he proceeds forthwith to demolish them. It is unfortunate—perhaps even wrong—that he should find so abundant material for this purpose within the profession as well as outside it; but it is in the nature of the subject that this should be the case. To record the seeming-marvellous is a very strong tendency in human nature; to analyse it and proclaim what substance there is in it is a very strong tendency in scientific human nature. It is as foolish to accept all that has been recorded by garrulity, as it is injudicious to fasten down analysts to every jot, and tittle of that in which, on examination, they find the presence or the possibility of a certain amount of truth.

A long quotation is made from a paper by Dr. Meadows, devoted to opening up the possibility of such maternal influence even with what we know in modern times of anatomy and physiology considered. Dr. Meadows' case was one of fright in early pregnancy, from pictures of different monstrosities being seen by the patient, and he seeks to found on that fright the deficiencies in form which actually appeared when the child was born. We find then Dr. Meadows sharply accused of having brought no evidence to show that the woman was especially frightened at the monstrosity which most resembled her own child. We presume that had the fright been caused by her seeing an elephant standing on its head, or a beetle crawling over her bread and butter, Dr. Meadows would have been equally ready to bring the mental emotion forward as an active cause of the monstrosity, and that he would have little dreamed of having it forced on him that the child must in such case have a tail and proboscis, or feelers and wings. Pained as the writer is at the want of logic in his opponents, one cannot but feel surprise at the blindfold ignorance which he shows of such a common—common-sense one might say—principle as that of the plurality of causes, for an explanation of which he may be referred to any text-book on the above subject. "Like causes produce like results" is the axiom he boldly puts forward; after that, all referring of malformations to "mental emotions, arising from a considerable number of dissimilar objects, even of the most diverse character," is at once, as it seems to him, rendered absurd and in future impossible. From how many different causes, we might ask, is dyspepsia produced? how many mental emotions can cause blushing? how many paleness of the features? how many different causes may throw a railway train off the line? in how many ways may a revolving carriage wheel be stopped? Were it not the fact that many diverse causes may produce the same effect, or to be more exact, that the same effect may enter among the sequences (in their totality different) of many different antecedent arrangements, the tracing of all relations of cause and effect

would have been child's play to what it is, and the question of maternal mental influence would never survive to tax the energies of a writer in the nineteenth century. However, since it is not so, one may take the liberty of pointing out to the writer that there is no more likely case for this complication arising than that where a uniform organic progression is interfered with by external causes. Take the case of the digestive process, alluded to already; the causes which may produce arrest of this, and pain to the possessor of the organs, are legion; most mental emotions, when arriving at a certain intensity, may be included in them. True, we believe that besides this similar part of their effect each emotion, or each physical cause, produces by-results, which are different according to the peculiarities of each; but the important effect to us, what in practice we style *the* effect, is in all the same. So it must be with interfering influences in the case of the fœtus; let them be ever so different, and their effect can only be that of staying the process of development generally, or in some one of its parts, according to the stage at which they interfere, or of turning it out of its course into another, which is determined, however, not nearly so much by them as by the laws governing the bodily processes and powers of mother and fœtus, these laws being nearly the same in all cases. This brings us, however, to another surprising feature in the doctrine of the writer, viz., that he seems quite to ignore all physical embodiment of mental states. Else how can we reconcile such statements as the following, which occur close together:—

“21. Monstrosities may arise from either abnormalities of the generative matter of one or both parents, abnormalities of the maternal organism, or from diseases and abnormal states of the membranes of the ovum and of the umbilical cord.

“22. That the time has fully arrived for the explosion of the popular error which attributes anomalies of organization to mental emotion.”

To begin from the beginning, let us remind the writer of that picture which we should have expected by this time to have found its way all over the civilized world, of the famished dog of German experimenters restrained just out of reach of a tempting morsel, with the saliva pouring from its mouth into the retorts of the inquirer. Hunger, it is true, is not an emotion but an appetite; nevertheless, here is the stepping stone to the belief in physical accompaniments of any mental state.

To go further, has the writer never seen the blush of shame, the flush of joy, the pallor of fright, the high step and flashing eye of pride? Is it necessary in the present day to quote these in order to convince him that there is nothing more likely to produce an “abnormality of organism” (temporary or permanent) than a powerful emotion; that in fact the material diffusion is, as far as we can see, necessary to the occurrence of the conscious state? For “mental emotion” we might well substitute in the second conclusion quoted,

"temporary or permanent abnormality of organism," in as far at least as violent emotions are included in the former phrase. What more likely to produce "abnormalities of the generative matter" of the mother than her more powerful emotions? and can we count less as generative matter what her blood, under the control of her nervous system, supplies to the fœtus for its growth than what it supplies for its origin in the ovary? Again, how can we better class those strong and prevailing emotions of fearfulness, which at times seize the pregnant woman, than as "abnormalities of the maternal organism," and what are they more likely to produce than "abnormal states," if not of the umbilical cord or membrane, of the placenta, its capillaries, and contents?

It is needless to pursue further this line of remark, and it is not necessary, nor is there space here to furnish an attempt at an explanation of the complete physical link between the mental emotion of the mother and the corresponding change in the fœtus. Enough has been said to show that instead of closing all debate on the subject, as is its evident intention, this paper leaves the matter very much *in statu quo*.

The Pulse of the Insane.—This paper is short but interesting. The author, who has evidently bestowed much attention on the subject, comes to the conclusion that the sphygmographic mark of a pulse beat in an insane patient tends, instead of being trirotic, to be dicrotic or even monocrotic. He gives a number of sphygmographic tracings in support of this statement, and a rationale of the operation of the mind in bringing about this result.

Trial of Samuel M. Andrew for the Murder of Cornelius Holmes.—This is a singular case of temporary mania in an individual coming of an insane family, in consequence of which he battered with stones a man who had committed an assault on him, in such a way that the man died. The verdict was to the effect that the culprit was guilty of aggravated manslaughter. The jury did not consider the statement of the criminal that he was unconscious while inflicting the fatal injuries sufficient to establish insanity as the cause of the murder.

Clinical Teaching and Pathological Investigations in Insanity is a sketch of the history of this part of the specialty, and is very interesting as showing the stronger and stronger tendency towards a medicinal treatment of lesions of the mind.

Dr. Ray's eloquent address embodies a thorough exposition of the gradual process of amelioration in the condition of insane patients. While much has been done, much it is affirmed requires to be done, and good hopes are entertained that with fair and liberal treatment of the unfortunate patients such knowledge of their state may be got in time as shall enable medical men to cope effectually with the great evil of Insanity.

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The seventh quarterly meeting of the Medico-Psychological Association was held (by permission) in the rooms of the Medical Society, George street, Hanover-square, on Tuesday, January 31st, 1871, ROBERT BOYD, M.D., President, in the chair.

The members and visitors present were:—Charles Davidson, W. Clement Daniel, W. B. Kesteven, Joseph Seaton, H. Sutherland, Thos. Harvey Lowry, H. Maudsley, Harrington Tuke, James Sabben, Crichton Browne, R. Boyd, J. Murray Lindsay, J. B. Turner, H. Stilwell, Alonzo Stocker, Edward H. Byas, J. O. Adams, G. Fielding Blandford, W. Wood, J. H. Paul. Visitors—H. Swainson, Balfour Browne.

Upon the question that the minutes of the last meeting (held at Glasgow) be confirmed, the Honorary Secretary drew the attention of the Association to the somewhat irregular proceedings that had taken place there, passing beyond the bounds of "scientific discussion," to which the business of the quarterly meetings should be confined.

As there were no other than printed minutes before the meeting, it was moved by Dr. WOOD, and seconded by Dr. SEATON, "That a minute of the quarterly meetings of this Association, held for scientific discussion, be made by the Secretary, and submitted by the President for confirmation at the next meeting."

This was carried, and, after some further discussion, it was determined to proceed with the scientific business of the meeting.

The PRESIDENT then read his paper on "General Paralysis of the Insane." (*See Part I. Original Articles.*)

In the discussion that followed,

Dr. ADAMS said that there were two points that struck him as being of singular interest in General Paralysis, which the paper just read had touched upon. First, the greater tendency to epilepsy and paralysis in the male than in the female sex, which he had occasion to verify in his own experience. Secondly, as to the duration of the disease. It is stated as lasting about two years; but he should be inclined to put it two years or eighteen months beyond that time. He would further ask whether any explanation could be given of the extraordinary remissions that were observed in the course of the disease? With regard to the treatment, he thought that more use might be made of the indications furnished by the thermometer. His own observations had led him to the conclusion that, in General Paralysis, the temperature of the body was very considerably increased.

Dr. CRICHTON BROWNE could not think that the previous speaker was correct in stating that epilepsy was so much more prevalent amongst males, as his own recent experience proved that, in asylums at least, the two sexes were affected by that disease in nearly equal proportion. At any rate, no comparison could be instituted between epilepsy and general paralysis, with reference to the relative liability of the sexes to suffer from them, as general paralysis was probably five times as frequent in the male as in the female sex. So great was the disparity that it had led some authorities to doubt whether women ever suffered from general paralysis. His own observation, however, embracing several hundreds of cases, induced him to conclude that, as he had stated, the relative liability of the sexes to that terrible disease was as five to one. These figures seemed to be borne out by the statistics contained in Dr. Boyd's exceedingly interesting and elaborate paper to which they had just listened. It had been asked by Dr. Adams what explanation could be offered of the special partiality of general paralysis for the male sex, and this question opened up a wide field for speculation and discussion. It was obvious that it must be considered along with the singularly unequal distribution of general paralysis throughout the country, and with those causes which seemed to be most influential in producing it. This disease—one of the pestilent camp followers of civilization—one of the penalties which we paid for our boasted progress—seemed to be more than keeping pace with our advancement, and to be attaching itself especially to

certain forms and phases of our civilization. There was reason to believe that it was, if not of modern origin, at least of modern growth, and that modern habits and modes of life had something to do with its propagation. This was essentially a feverish and a fidgety age, in which an unappeasable restlessness pervades all ranks and classes. The struggle for existence had become a *mêlée*, and the recommendation to "commune with your own heart in your chamber and be still," was looked upon as an obsolete adage. We had lots of Ranters, but no Quietists, now. The result of all this ceaseless agitation and ambitious striving was, that the nervous centres often gave way under the strain imposed upon them, and frequently passed into a terrible, morbid exaggeration of their prevailing style of functional activity. By a hideous kind of poetical justice general paralysis becomes a distorted reflection of the follies of the age. It is the miserable *otium cum dignitate* of the man of business. This being so, it is of course obvious that women, hedged in as they are by the domesticities, and still in subjection, are less exposed to those influences and vicissitudes which incline towards general paralysis. They partake also in a less degree of those diathetic tendencies with which general paralysis is usually found associated. After touching on the earliest symptoms of general paralysis, Dr. Browne went on to express his belief that it consisted really in a diffuse periencephalitis, preceded by repeated and long continued cerebral hyperæmia, induced in its turn in many instances by excessive and ill-regulated functional activity of the brain. This periencephalitis, he said, resulted in degeneration in the vessels and membranes, in atrophic changes in the cortical and medullary substance, and perhaps in an excessive formation of connective tissue. It had some claims to a specific character, and presented one or two varieties. In examining the brains of general paralytics dying in the West Riding Asylum, he had been much struck by the constant, decided, and universal thickening of the pia mater and its adhesion to the convolutions beneath. It had been his practice for some time past, with a view to some investigations which he was pursuing, to strip the brains examined in the West Riding Asylum entirely of their membranes, and this process had enabled him to notice the tenacity of the attachment of the pia mater to the subjacent cortical substance, which he could only compare with the adhesion of the capsule to a small contracted kidney. In many cases the pia mater could only with great difficulty, and in shreds, be separated from the surface of the convolutions, which were left rough, torn, and abraded after its removal. The degree or extent of adhesion of the pia mater could not be properly estimated by the ordinary plan of tearing off a small portion near the fissure of Rolando, as in that quarter of the brain the adhesions are always least firm and numerous. Dr. Browne next referred to the treatment of general paralysis, and ventured to assert that this subject was generally approached in too hopeless a spirit. An idea was abroad that this malady was absolutely incurable, and consequently those suffering from it were relegated to dreary, effortless, pathological limbo. He could not assent to any such view. He recognised no element in general paralysis which placed it permanently beyond the reach of therapeutic agencies, and he anticipated with some confidence the time when we shall be able to arrest its advance, and even to make it retrace its steps, when submitted to treatment in its earlier stages. Laennec pronounced pulmonary consumption as incurable as carcinoma; and yet we can now claim under certain conditions to cure that disorder, and perhaps a similar change will before long take place in professional opinion respecting general paralysis. At any rate, the conspicuous absence of treatment now prevalent was to be deplored. Guided by some successful experiments in the treatment of acute hydrocephalus carried out, if he remembered correctly, in the Children's Hospital in Edinburgh, he had two years ago applied counter-irritation by means of croton-oil, liniment or tartar emetic ointment, to the shaven scalps of four patients in whom the symptoms of general paralysis, bodily and mental, were well pronounced; small doses of biniodide of mercury, and iodide of potassium being at the same time administered. The results obtained in these four cases, although the counter irritation was only maintained for a short time—about a month—were assuredly such as to encourage further experiment in the same direction. Of the four patients thus treated, three were still alive, while all the other inmates of the asylum, noted as having been at exactly the same stage of the disease at the same time, had died long ago. The one man treated by counter-irritation who had died, displayed a singular improvement in intelligence after being thus treated. His delusions left him, and his perspicuity returned, but at the same time all the motorial symptoms of the disease became intensely aggravated, and at length produced

fatal exhaustion. In the other three men submitted to counter-irritation the rancour and speed of the disease have been remarkably moderated. It unfortunately happens that general paralytics are rarely sent to County Asylums until the disorder has fastened firmly on the brain, and has grown down through the system. Under such circumstances, treatment is carried on at a great disadvantage. Could the disease, however, be recognised and attacked at its outset, Dr. Browne believed that important results would be secured by the kind of treatment which he had indicated. He, therefore, recommended it to the attention of those engaged in private practice. He added, that he had recently employed the Calabar bean—that valuable medicine brought before the profession in this country by Dr. Fraser—with marked benefit in those attacks of excitement which chequer the course of general paralysis, and which have been hitherto so intractable. In these, as well as in some other forms of organic cerebral disease, the extract of *physostigma venenosum*, in doses varying from a quarter of a grain to a grain, had a rapid and powerful calmative action. Excitement and muscular tremor abated under its use, and some degree of general and permanent improvement followed. The action of the neurotic remedy might be due to its power of diminishing excitability in the motor endorgans and conductivity in the motor nerves, or to its action upon the tension and calibre of vessels aided by its sedative influence on the heart. But, however that may be, Dr. Browne had no doubt that it would prove eminently serviceable in the treatment of general paralysis and cerebral disorganisation. His friend, Dr. Sabben, had visited the West Riding Asylum in the month of December, and had seen several of the patients who were being treated with Calabar bean, and heard the testimony of those around as to the amelioration that it had wrought in their conduct and condition. Dr. Browne would only refer to one other point—an important one in differential diagnosis. He had remarked that the muscle earliest and most decidedly affected in general paralysis was the great zygomatic, the trembling of which as a primary symptom must be familiar to every one present. Well, this was classed by Duchenne as the muscle of benevolence *par excellence*, and it was curious to detect in this the intimate union of the mental and motor symptoms. But trembling of the lip was also an evidence of emotion,—as in the child about to cry, and as in the agitation of incipient mania, which it was sometimes not easy to distinguish from general paralysis. The emotional movement of the zygomatici, however, was bilateral. Those of the two sides trembled consentaneously, whereas in general paralysis the movement was unilateral or alternative, limited to one side, or passing from the one to the other. Dr. Browne concluded by apologising for the length of time which he had detained the Society, pleading the interest of the subject, and the rareness of any opportunity of discussing it, as an excuse for the fullness with which he had dealt with it.

Dr. TUKE—I entirely concur with my friend, Dr. Crichton Browne, in his remarks, as to the great error that is too commonly made of considering general paralysis an absolutely incurable disease. To describe it as *nullis medicabilis herbis*, is, indeed, to make it an opprobrium to medicine; and, although we must acknowledge the almost constantly fatal nature of the malady, yet the frequently very long remissions in its course, and its occasional cure, may lead to the hope that we may yet be able to control its progress. I have as yet had no experience in the use of the Calabar bean, which Dr. Crichton Browne has mentioned, and it evidently deserves careful trial. In my own practice I have found the bromides useful, and Dr. Lockhart Robertson's combination of morphia and digitalis, in the occasional paroxysms of violence, is very efficacious; but the remedy that seems to me, in well-selected cases, of the greatest value is mercury. This was the treatment recommended by the late Dr. Alexander Sutherland; and I am glad to remember that his very considerable experience negatived the statement that general paralysis is to be considered as invariably incurable. A case of general paralysis in an early stage which was under my care last year, has recovered perfectly under the use of sedatives and a prolonged course of calomel baths. Of course it is yet too soon to say positively that this recovery is not simply one of those remissions that are so singular a characteristic of the malady in question; but the patient is still under my observation, and I trust to be able to count him among the few permanent recoveries. The probable duration of life in a patient attacked by general paralysis, in my experience, is about four years. Calmeil, I think, states three years as the mean duration. It is probable that the modern treatment in England has somewhat improved upon the treatment in the French asylums at the time when M. Calmeil's excellent monograph was published. Statistics showing the disease to be apparently

more rapid in its progress, have probably dated the origin of the malady only from the entrance of the patient into an asylum, and not from the first appearance of its symptoms. The valuable paper of our President deals so much with statistics, that it is difficult to speak upon it without the actual figures. On one interesting question I understood him to say that the proportion of males to females is about four to one. I have found it at Hanwell to be much more than this, and the cases there were in the relation of at least eight to one. I agree with Dr. Browne in thinking this disproportion of great importance in the study of the malady. On what it depends, in the present state of our knowledge, must be a matter of conjecture only. Almost still more extraordinary is the fact that while men in the higher ranks of society are especially liable to the attacks of general paralysis, it must be very rarely that women of the same class suffer from it, for in a practice of twenty-five years, and in a life time spent among the insane, I have only seen one case of general paralysis in the rank of a gentlewoman. Dr. Crichton Browne will remember visiting this lady with me about seven years ago. There are several physicians present whose experiences we should like to hear on this subject. It is a fact, as far as I know, perfectly inexplicable, except on a theory the exposition of which may as well be delayed till the fact itself is more definitively proved.

Concerning recoveries, Dr. BOYD stated in reply that recoveries sometimes take place in general paralysis, and referred to cases given in his paper. Cases 1 and 3 were discharged recovered, but after several months both relapsed. Case 4 has quite recovered from the paralysis, but is still in a state of dementia, in the asylum. The proportion of males to females was as 4 to 1.

On the motion of Dr. TUKE, seconded by Dr. BLANDFORD, a vote of thanks was proposed to Dr. BOYD, and carried unanimously.

The meeting then adjourned.

Appointments.

RUTHERFORD, JAMES, M.D. Edin., F.R.C.P. Edin., has been appointed Medical Superintendent of Argyll District Asylum, *vice* John Sibbald, M.D., appointed Deputy Commissioner in Lunacy for Scotland.

DOUGLAS, W., M.D., L.R.C.S. Ed., has been appointed Deputy Superintendent of the Criminal Lunatic Asylum, Broadmoor, *vice* Wm. Orange M.D., M.R.C.P.L., promoted to Resident Medical Superintendent.

GELSTON, R. P., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Assistant Resident Physician at the Clonmel District Lunatic Asylum.

MARSH, J. W., M.R.C.S.E, late Resident Clinical Assistant at Bethlehem Hospital, and formerly House Surgeon at the London Hospital, has been appointed Assistant Medical Officer at the Lincoln County Asylum, *vice* W. Douglas, M.D., L.R.C.S. Ed., appointed Deputy Superintendent of the Criminal Lunatic Asylum at Broadmoor.

MURIE, J., M.D., L.F.P. & S. Glas., has been appointed a Resident Medical Officer at the Bethnal House Lunatic Asylum, Cambridge Road, *vice* C. Davidson, M.R.C.S.E.

LYLE, T., M.B., C.M., has been appointed Assistant Medical Officer to the Borough Lunatic Asylum, Newcastle-on-Tyne.

WICKHAM, R. H. B., L.R.C.P. Ed., F.R.C.S. Ed., Assistant Physician to the Royal Edinburgh Asylum, has been appointed Resident Medical Superintendent of the Newcastle-upon-Tyne Borough Lunatic Asylum, *vice* H. G. Stewart, M.D., L.R.C.S. Ed., deceased.

WEATHERHEAD, Mr. J. F., has been appointed Assistant Medical Officer to the City of London Lunatic Asylum, Stone.

OBITUARY.

Dr. Hugh Grainger Stewart.

WE have to lament the death of a member of our Association, and an esteemed contributor to these pages. On the 26th ult., Dr. Hugh Grainger Stewart, Medical Superintendent of the Newcastle Borough Lunatic Asylum, died at Coxlodge, at the early age of 35, and at a time when we have reason to know he was preparing for further services to our specialty.

Dr. Grainger Stewart was born and educated in Edinburgh, where he graduated in medicine in 1856. After spending a portion of this and the following year in Paris and on the Continent, he was chosen Assistant Physician to the Royal Asylum near Dumfries, while this Institution was under the superintendence of Dr. W. A. S. Browne. He entered upon his duties there in the autumn of 1857, and so rapidly did he develop those qualities deemed requisite to a successful practice among the insane, that in the following spring a vacancy occurring in the establishment through the elevation of Dr. Browne to a Commissionership in Lunacy, the then Directors of the Asylum, with unanimity, appointed Dr. Stewart to the office of Senior Assistant. In doing this they shewed a just discrimination of his merits, while they gave him an opportunity of using profitably the records of an old and famous establishment. It was in his daily routine of work here that Dr. Stewart found leisure to write his essay on "Heredity among the Insane," and his papers on "Asylum Statistics," &c., besides reports of unusual cases to various journals.

The readers of this journal know the value of Dr. Stewart's important scientific contributions; and no better evidence of faithfully discharged duty, urbanity of manner, and evenness of temper, could be adduced than that of his successor at the Newcastle Asylum, who writes that "he found the words wanting to express the profound sorrow caused by the melancholy intelligence of Dr. Stewart's death." "Writing," he says, "from the place where good and kind Dr. Stewart was so universally loved and appreciated, my tokens of sympathy are almost lost in the general commotion created in the whole house. How, during the last hour, patients and attendants have been anxiously, almost sceptically, questioning: how the news spread from gallery to gallery, how sighs and tears and loud expressions of grief and amazement pervaded the whole establishment, is perhaps more than I can describe, but not more than you can imagine, knowing as you do how many loving hearts he has left within these walls."

In 1866 Dr. Stewart was appointed to the Superintendence of the Newcastle Asylum, and a fuller field was opened to him for displaying those essentials of asylum management which, by long study, seemed to have become a part of himself. Here he had an old and ill-adapted house to manage, at a time when he had also to superintend, arrange, and organise the new Asylum. This is not the place to say anything of the former, but everyone who has paid a visit to the new Asylum buildings will acknowledge the evidences which appeared, both in the house and grounds, of a superintending mind, highly appreciative of the artistic and beautiful. No wonder that the grief felt at his loss was deep and unusual, and that, out of a large field to choose from, the Committee of Management felt it difficult to select a successor with such qualifications as Dr. Stewart possessed.

Dr. Stewart delivered a course of lectures every year at the Infirmary, in connexion with the School of Medicine.

Books Received.

The GENERAL SECRETARY has to acknowledge the receipt, on behalf of the Society, of the following works:—

Studi clinici ed esperimentali sulla Natura Causa, Terapia della Pellagra. Del Dott. Cæsare Lombroso, Professore di clinica della malattie mentali.
 Klinische Beiträge zur Psychiatrie. Physikalische, statische Studien und Krankengeschichten von Dr. Cæsar Lombroso. Mit genehmigung des Verfassers gesammelt und aus dem Italienischen übertragen von Dr. M. O. Fraenkel.

We have received an elaborate report of the operations of the Ambulance of the old *Corps Législatif* during the siege of Paris—from the 19th September last up to 31st January last. It was under the medical directorship of our distinguished honorary member, Baron Mundy, M.D., who we rejoice to see still continues to evince, in the most practical way, the zeal and energy of his character in the cause of humanity.

MESSES. J. B. LIPPINCOTT AND Co., PHILADELPHIA.—We have regularly received the “Medical Times,” and have directed this Journal to be forwarded, in exchange, to you by care of Messrs. Trübner and Co., as desired.

We regret that we have been obliged, by pressure on our space, to defer till our next number some valuable contributions.

NOTICE OF MEETING.

A Quarterly Meeting of the Medico-Psychological Association will be held in Manchester, on Thursday, April 27th, 1871. Notices of Papers to be sent, as soon as possible, to the Honorary Secretary for Scotland,

DR. J. BATTY TUKE,
 Cupar, Fife.

THE JOURNAL OF MENTAL SCIENCE, JULY, 1871.

[Published by authority of the Medico-Psychological Association.]

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The Journal of Mental Science.

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English books for review, pamphlets, exchange journals, &c., to be sent either by book-post to Dr. Maudsley, or to the care of the publishers of the Journal, Messrs. Churchill and Sons, New Burlington Street. French, German, and American publications may be forwarded to Dr. Maudsley, by foreign book-post, or to Messrs. Williams and Norgate, Henrietta Street, Covent Garden, to the care of their German, French, and American agents:—Mr. Hartmann, Leipzig; M. Borrari, 9, Rue de St. Pères, Paris; Messrs. Westermann and Co., Broadway, New York.

Authors of Original Papers receive three extra copies of the Journal by Book-post. Should they wish for Reprints for private circulation they can have them on application to the Printer of the Journal, Mr. Bacon, Lewes, at a fixed charge of 30s. per sheet per 100 copies, including a coloured wrapper and title-page.

The copies of *The Journal of Mental Science* are regularly sent *by Book post (pre-paid)* to the ordinary Members of the Association, and to our Home and Foreign Correspondents, and the Editor will be glad to be informed of any irregularity in their receipt or overcharge in the Postage.

The following *EXCHANGE JOURNALS* have been received since our last publication:—

Annales Médico-Psychologiques; Zeitschrift für Psychiatrie; Vierteljahrschrift für Psychiatrie in ihren Beziehungen zur Morphologie und Pathologie des Central Nervensystems, der physiologischen Psychologie, Statistik und gerichtlichen Medicin, herausgegeben von Professor Dr. Max Leidesdorf und Docent Dr. Theodor Meynert; Psychiatrisches Centralblatt herausgegeben von Vereinen für Psychiatrie und forensische Psychologie in Wien, Redigirt von H. Beer, M. Leidesdorf und Th. Meynert; Archiv für Psychiatrie und Nervenkrankheiten, herausgegeben von Dr. L. Meyer und Dr. C. Westphal; Correspondenz Blatt der deutschen Gesellschaft für Psychiatrie; Irren Freund; Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali; Annali Frenopatici Italiani Giornale del R. Manicomio di Aversa e Della Società Frenopatica Italiana Diretti dal dott. Cav. B. G. Miraglia; Medizinische Jahrbücher (Zeitschrift der K. K. Gesellschaft der Aerzte in Wien); Rivista di Discipline Carcerarie in relazione con l'Antropologia, col Diritto Penale, &c., diretta da Martino Baltram Scalia; the American Journal of Insanity; the Quarterly Journal of Psychological Medicine, and Medical Jurisprudence, edited by William A. Hammond, M.D. (New York); the British and Foreign Medico-Chirurgical Review; the Journal of Anatomy and Physiology, conducted by G. M. Humphry, M.D., F.R.S., and Wm. Turner, M.B., F.R.S.E.; the Dublin Quarterly Journal; The Lancet; Medical Times and Gazette; The Practitioner, a monthly Journal of Therapeutics, edited by F. E. Anstie, M.D.; the Medical and Surgical Reporter, a weekly Journal, by S. W. Butler, M.D.; the Medical Times of Philadelphia. Also the Morningside Mirror; the York Star; Excelsior, or the Murray Royal Institution Literary Gazette.



THE JOURNAL OF MENTAL SCIENCE.

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VOL. XVII.

PART 1.—ORIGINAL ARTICLES.

Illustrations of the Influence of the Mind upon the Body in Health and Disease, with especial reference to the Imagination. By DANIEL H. TUKE, M.D., M.R.C.P., late Visiting Medical Officer to the York Retreat.

(Continued from page 563, Vol. XVI.)

INFLUENCE OF EMOTIONS.

(II.) *The Emotions act upon the Heart and non-striated muscles with a power equal to, if not greater than, that which they exercise over the voluntary or striated muscles; causing contraction, spasm, and paralysis.*

Hitherto we have as far as possible restricted our attention to the movements caused by the action of the emotions upon the muscles over which the will *can* exert more or less control, whether muscles of a purely voluntary or mixed character, all of these being striated, and supplied by nerves undoubtedly derived from, and forming an essential part of, the cerebro-spinal system. From the compound character of some *acts*, as Respiration, it is impossible to avoid their consideration, in both categories of muscular fibre, the voluntary and the involuntary. This must not, however, be allowed to obscure the important facts, that while all muscles are liable to be influenced by the emotions, only some can be influenced by the will; and that these derive their nervous influence from what are understood as cerebro-spinal nerves, while those which respond to emotional, but not to volitional stimuli, derive theirs chiefly, if not entirely, from the sympathetic. Claude Bernard, indeed, refuses to admit the distinction indicated by these terms, and says they ought to

be expunged from the vocabulary of science; but it is sufficient to reply, in justification of retaining them, that (as he admits) the sympathetic ganglia enjoy certain special powers, that although the sympathetic nerves arise from the spinal cord (including the medulla) microscopists believe them to be derived from a distinct order of cells, that he himself cannot escape the distinctive use of the word against which he protests, and allows that "it is highly probable that in the difficult and complicated study of the nervous system we meet *with two distinct orders of nerves*; the vessels are placed under the influence of the first, while the histological elements obey the power of the second; nutrition depends on the former, and physiological activity is aroused by the latter." Although he adds, "the sympathetic nerve may therefore be viewed as a complementary apparatus placed by the side of the cerebro spinal system,"* and refers the different results of excitement of the two to the different nature of the elements on which their action is exerted, there is sufficient reason, we think, for continuing to use these well understood terms, while not denying the spinal origin of the sympathetic.

Passing then from the voluntary muscles, we proceed to consider the influence of the emotions upon the Heart and nonstriated muscles.

1. *The Heart.* The influence of the emotions upon this organ is so remarkable, that it has always been a problem of great interest to determine the nature of their relation; and to ascertain from anatomical facts, why it is that the feelings and the heart are, and always have been, so inseparably connected. The heart in this connection is the most prolific source of figurative modes of speech. Indeed the fact with which this is connected, of the heart being regarded by mankind as the organ of the passions, is itself an indication of the intimate relation subsisting between certain states of the mind and the movements and sensations of this viscus. "Heart-rending" descriptions, "cordial" expressions of good will, and numberless cognate terms at once occur to the mind. David said "at this also my heart trembleth and is moved out of his place." Dr. Johnson's commentary is "The heart is considered as the seat of tenderness: a *hard heart* therefore is cruelty."

It is not surprising that men should wonder how this comes to pass, if what the physiologist tells them is true,

* Lectures on the Spinal Cord. "Medical Times and Gazette," Aug. 17, 1861.

that the feelings which they associate with the heart are seated in the brain.

“But since the *brain* doth lodge the powers of sense
How makes it in the *heart* those passions spring?”

The poet’s reply

“The mutual love, the kind intelligence
’Twixt heart and brain, this sympathy doth bring;”

if vague, is scarcely more so than what we find in some medical works. Burdach, writing in 1726, observes “it is said I love you with all my heart,” “this tears my heart,” &c.; not because those sentiments are produced in the heart, but because in every violent affection, either the heart or other parts, by the movements of which we describe the affections, in our language, act *sympathetically*. (*Meditationes de Animâ Humanâ*, cap. vii. p. 198. Gall, vol. ii, p. 75.) But Burdach was opposing the vulgar error that the heart is itself the seat of the passions. Plato had placed one of his three faculties of the mind—the irascible—in the heart, and Aristotle had made it the seat of the soul, and the origin of the nerves. Others followed in the same direction. It is remarkable that while Unzer and Prochaska entirely avoided this error, later physiologists like Virèy should have returned to the old and vulgar idea. Unzer, when treating of grief and fear, observes “an irregular influence of the vital spirits on the nerves of the heart renders its movements at one time excessive, at another enfeebles them even to syncope.”* He clearly does not locate the emotions in the heart. Virèy, after observing that “According to Prochaska, the passions act on the heart by means of the nerves of the eighth pair,” adds “but may it not be maintained, on the contrary, that the emotions of the heart *ascend* to the brain by these same nervous branches. For Vauvenargues said with reason, *great thoughts come from the heart*.” “Instinct is innate in the breast; it emanates from within the internal organs of life; *it acts without the concurrence of the brain*.” Gall, who cites these passages only to indignantly refute them, replies “the organ which produces an affection or a passion is, in fact, confounded with the viscera on which this affection or this passion acts. The nervous system of the chest, the abdomen, the spinal marrow, of the senses, of the brain, are put in communication by nervous branches, in

order that they may act reciprocally upon each other." (Vol. ii, p. 76.)

Gall as strongly combats the notion with which these views were closely connected, that the ganglia of the sympathetic are themselves the seat of the passions, and justly asserted that "emotion being felt in certain parts, in connection with the affections and passions, proves nothing as to their seat." (Op. cit. p. 91).

It is not necessary to repeat the observations already made (p. 175), discarding any hypothesis in regard to the localisation of the passions, which does not refer their seat to the encephalon. Their ideational element is as clearly referable to the hemispheres, whatever probability may attach to the view that the emotional element is, in common with sensation, a function of one of the ganglia at the base of the brain (optic thalamus?), and in close relation with the medulla oblongata. It only remains to enquire here, Through what nerves do the emotions influence the heart?

As this organ is supplied by nerves from the pneumogastric and the sympathetic, and as it is impossible to make satisfactory experiments upon these nerves in connection with the transmission of purely emotional influences, the first question to be determined is the effect produced upon the heart by irritation and division of these nerves. Here, unfortunately, we are met by so much contradictory evidence that at first it seems hopeless to arrive at any definite conclusion. Let us, however, glance at the facts brought forward, and endeavour to elicit the main truth.

Cl. Bernard says that division of the pneumogastrics disturbs the heart's motions, and produces coagulation of blood in its cavities. ("Med. Times and Gaz.," April 27th, 1861.) Weber found that it arrests the movements of the heart, and that the same effect is produced by an electric current transmitted through these nerves, divided at their origin—the organ being relaxed. ("Syd. Soc. Year Book," 1859.) Irritation (mechanical) of these roots, according to Valentin and others, accelerates the heart's action. Schiff suggests this may be due to exciting the reflex centres of the sympathetic system contained in its substance.

Physiologists have been greatly divided in opinion as to the motor or sensory character of the pure and unadulterated vagus. M. V. Kempen asserts that it possesses motor fibres before the spinal accessory joins it. Dr. Jackson has pointed out that this is confirmed by, or at least is in accordance with,

Lockhart Clarke's observations, that some of the fibres of the hypoglossal nerve appear to arise from the pneumogastric nucleus, just as they do from that of the spinal accessory. (Lond. Hosp. Rep. 1864.)

On the whole the evidence is in favour of the conclusion that the pneumogastriks, pure and simple, contain motor fibres, and that through the cardiac branches they affect the motion of the heart; whether they restrain its movements, as now so generally believed, is a more doubtful question.

With regard to the influence of the sympathetic, Weber found that stimuli conveyed through this nerve accelerate the movements of the heart. On the other hand, in a case quoted by Dr. Carpenter from Muller's Archives, in which the heart's pulsations were occasionally checked for an interval of from four to six beats, its cessation giving rise to the most fearful anxiety, and to acute pain passing up the head from both sides of the chest, these symptoms were connected, as it proved on a post-mortem examination, with the pressure of an enlarged bronchial gland upon the great cardiac (sympathetic) nerve. (Human Physiology, p. 475.)

These and other facts leave no room to doubt that the sympathetic nerves are concerned in the motion of the heart, and the question is whether the emotions act through them or the pneumogastriks, or both, when accelerating or retarding the movements of this organ.

"It is difficult," as Dr. Carpenter observes, "to ascertain by experiment upon the lower animals, whether simple emotion, unattended with struggling or other exertion, would affect the pulsation of the heart after section of the pneumogastriks; but when the large proportion of the sympathetic nerves proceeding to this organ is considered, and when it is also remembered that irritation of the roots of the upper cervical nerves stimulates the action of the heart through these, we can scarcely doubt that both may serve as the channels of this influence, especially in such animals as the dog, in which the two freely inosculate in the neck." (P. 474.)

In man, it will be remembered, there are at least three points of communication between the pneumogastric and the first or upper cervical ganglion and nerve; first, near the base of the cranium; this sympathetic ganglion is connected by small branches with the second ganglion of the pneumogastric; secondly, a branch joins the ganglion of the root of the pneumogastric; and thirdly, the upper cardiac nerve sends numerous branches to the pneumogastric.

Kirkes and Paget observe that the pneumogastric enters into so many anastomoses with the nerves of the sympathetic that it is hard to say whether the filaments it contains are from their origin its own, or derived from the latter, and they regard many of the filaments *originating in its own ganglia as sympathetic in character*. (Handbook, p. 449.)

May we not, then, regard the pneumogastric, apart from the filaments derived from the spinal accessory, facial, and hypoglossal nerves, as really a "sympathetic nerve?" This is an important question, because as the emotions can, and the will cannot, act upon the heart; and as it may be held that the latter never acts through the sympathetic, it would help to explain our powerlessness over the heart if this question could be answered affirmatively. We confess we have never yet seen a thoroughly satisfactory explanation of the fact, that while the emotions can so remarkably influence the heart's movements, and while there are motor filaments in the pneumogastric between its origin in the medulla oblongata and the heart, the will cannot accelerate or retard the action of a muscle which contains striated (or so-called voluntary) muscular fibre. The will acts on the larynx and pharynx through the filaments of the pneumogastric derived from the spinal accessory and other motor nerves, and it is true that the heart is not supplied by these nerves; but this does not remove the difficulty; for so long as it appears that the pneumogastric has independent motor fibres proceeding to an organ composed of striated muscular fibre, we ought to discover why the will does not act through them.

We hold, therefore, that the pure pneumogastric is really a sympathetic nerve, according to its old name (*nervus sympathicus medius*), and that as the will cannot act through the sympathetic system (whatever the structure of the tissue it supplies), while the emotions, as is abundantly clear, can—all voluntary actions performed through the compound pneumogastriacs pass along the filaments derived from the spinal accessory, facial, and hypoglossal nerves, while all emotional acts are transmitted through the pure pneumogastric and through the sympathetic filaments which join it from the first cervical. It may seem, however, improbable that an organ should be supplied from two distinct sources with sympathetic nerves, and that it is not in accordance with the modern view, that the pneumogastric is the inhibitory nerve of the heart, while the sympathetic supplies it with motor power. It must, however, be remembered that Cl. Bernard speaks with

great hesitation as to the origin of the two classes of nerves which supply the muscular tissue of the blood vessels—the dilators and contractors—and thinks it uncertain whether both are derived from the sympathetic, or one from this source and the other from the cerebro-spinal axis, and that, therefore, even if we allow the different functions, as regards the heart, of the pure vagus and the sympathetic nerves, it does not follow that they are not both members of the sympathetic system. Or, should this position prove untenable, and it were held that the pure vagus contains only excito-motor nerves distinct, as Brown-Séquard believes, from those of the voluntary class, the will might have no power over them, while emotional excitement would.

However, we incline to regard the vagus, so far as it supplies the heart, as essentially a sympathetic nerve, and we doubt whether the inhibitory function attributed to it is fully proved; indeed, if we accept the experiments of Professor Moleschott, of Zurich, it would seem to be disproved.* He found that although most of the observations made by Weber, Wagner, Bernard, &c., could be repeated, and were not really inconsistent with his own, they did not prove the alleged distinctness of function between the vagi and the sympathetic. A slight stimulus of the former quickened the heart from 190 to 232 in the rabbit, and from 30 to 42 in the frog. The same occurred when the vagus was cut through and the peripheral end of the nerve was excited, showing that it is not merely a reflex phenomenon. If the stimulus of the vagus is continued, the pulsations of the heart are retarded, and ultimately are entirely arrested. As this is what would happen if the anterior roots of the spinal cord were similarly excited, Moleschott sees no reason for assigning an inhibitory function to the vagus. With regard to the alleged fact that section of the vagi and consequent paralysis cause frequency of the pulse, he found that the fact itself was not correctly stated, but that generally in rabbits the pulse was slower after section. It is only some time after the operation that frequency of pulse is observed, and this he attributes to

* Since Moleschott's experiments, those of M.M. Cyon and Ludwig would appear to indicate the existence of accelerator and depressor nerves of the heart, the former emerging from the cord with the third branch of the inferior cervical ganglion, and the latter arising (in rabbits) from the pneumogastric and superior laryngeal nerves. Whether this conclusion be established or not, their experiments tend to show that one channel through which nervous influence is exerted upon the heart is that of the splanchnics as vaso-motor nerves. (*Vide* Biennial Retrospect, N. S. S., 1869.)

the pressure of exudation. Further, he demonstrated that the direct galvanic current produces an increase, and the reverse current a diminution of the heart's action, as holds good when motor nerves are acted upon in the same way.

As to the sympathetic nerves of the heart, Moleschott's experiments demonstrated that the same phenomenon occurred as in the case of the vagi, when excited mildly and strongly by galvanism, and he concluded that these two sets of nerves exercise the same influence upon this viscus.

It appears, therefore, fair to conclude that the emotions act upon the heart through both the vagi and the sympathetic. Their *modus operandi*—now accelerating, now arresting its action—would seem to derive illustration from these and similar experiments, and this, I think, is the case whether or not they be regarded as evidence in favour of or against the inhibitory function of the vagus. Substitute emotion for the stimulus applied by Moleschott to the nerves proceeding to the heart, and we can well understand how the former should produce the various and opposite disturbances of the heart, including spasm and paralysis, with which we are familiar. First, as a feeble or moderate stimulus of the vagus (whether electric or otherwise) causes a considerable rise in the pulse, so does an emotion which is not excessive in character. Secondly, as an increased stimulus gradually retards the action of the heart, while a very powerful one immediately arrests it, from the fatigue which succeeds stimulation, just so, we can well conceive, a violent emotion would act. Thirdly, the fatigue may be gradually recovered from, and the heart's action be restored to its normal frequency and force.

The ganglia of the heart appear to act in the way of communicating the condition of one of the four nerves supplying the organ to the other three. In regard to emotional stimuli, however, it seems impossible to decide whether one is more influenced than another, and in view of Professor Moleschott's experiments, it is evident that the emotions may act precisely in the same way, through either the vagi or the sympathetic. We may be allowed to surmise that the ganglia and the four-fold supply of nerves to this organ are designed to lessen its liability to fatal paralysis and spasm by emotion. "The heart," observes Moleschott, "is animated by four very excitable nerves, which may easily be over-excited; these four nerves, two vagi and two sympathetics, have a peculiar consensus, which is no doubt due to the action of the ganglia

of the heart, so that the state of irritation or over-excitement which is produced in one of the nerves is transmitted to the three others; but it is not possible to exhaust permanently the other three by over-excitation of one nerve *singly*, as stimulants which would be powerful enough to effect this would soon kill the excited portion of the one nerve, and therefore lose their effect upon the other three; such an effect being only possible as long as the nerve acted upon retains part, at least, of its excitability.”*

Adopting, therefore, the view that the nerves of the heart, from whatever source derived, are sympathetic—in fact, vaso-motor nerves—we conclude that the emotions act upon this central muscle through them all. This conclusion accords with the opinion of Kirkes and Paget, that the cardiac branches of the pneumogastric are one, though not the sole channel through which the influence of mental emotion is transmitted to this organ, and with that of Dr. Carpenter, already cited; neither does it contradict the judgment expressed by him elsewhere (*Manual of Physiology*, p. 539), that the sympathetic constitutes the channel through which the passions produce palpitation of the heart, nor the forcible observation of Professor Laycock, that every stroke of the heart in emotion occurs under the same influence as that which secretes bile. (*Mind and Brain*, vol. ii., p. 388.)†

Simple acceleration of the heart's action is the most frequent and obvious result of emotional excitement, and very little observation suffices to show that opposite emotions produce, in this respect, the same result. Thus terror and joy alike cause palpitation. It has been said that palpitation from the former is explained by supposing it to be the precursor of flight; but this explanation appears a doubtful one, and certainly does not help us to explain the increased beatings of the heart from joy. When, however, we speak of the same result being produced by opposite emotions, we find, on closer examination, that this sameness applies to the frequency of

* In the “*Medical Times and Gazette*,” July 27, 1861, is a *resumé* of the Professor's conclusions, from which the foregoing is derived.

† Having read Dr. Waller's paper (May 12, 1870) on the functions of the vagus, in the abstract of the proceedings of the Royal Society, I wish to add that if his conclusion that it is a spinal nerve, and unconnected with the heart, be confirmed, it altogether supports the view that the heart is exclusively supplied by sympathetic fibres, only it is no longer necessary to find reasons for the will not acting on the heart through the vagus, and the simple result is obtained that the emotions influence this organ solely through the acknowledged sympathetic nerves.

the pulsations rather than to their character; that the palpitation of joy is of the nature of increased vital action; that of terror of simple irritation, and is no sign of power. It may doubtless be laid down as a general principle that pleasurable emotions increase the activity of the vital functions, and painful ones depress them. To this rule, the influence of these opposite emotions in causing increased frequency of the heart's pulsations offers no real exception. Terror induces an irritative frequency which, if continued, ends in cessation of the contractions of the organ; and joy, if sudden, may be alike prejudicial. But take moderate and continuous joy—a joyous frame of mind—and compare its effects with those of a permanently fearful or sorrowful state of the feelings, and the result will undoubtedly be in harmony with the foregoing principle. The real force and the regularity of the heart's beat will be increased under the former, and decreased under the latter conditions. One of Hoffmann's aphorisms runs thus:—"Tristitia, cordis motum, et sanguinis circulum reddit languidiorem." (*Opera*, Tom I., p. 193.) Irregular contraction of the heart from emotion, from slight intermission to actual spasm, is a frequent circumstance. It arises sometimes from a particular cause, and is not excited by another, which appears to involve a more powerful emotion. Active anxiety or suspense has a special tendency to induce it. John Hunter says he was subject to "spasms of his vital parts" when anxious about any event—a circumstance of interest when his mode of death is remembered. "At my country box I have bees which I am very fond of, and I once was anxious about their swarming, lest it should happen before I set off for town; this brought it on. The cats tease me very much by destroying my tame pheasants, partridges, &c., rooting up my plants. I saw a large cat sitting at the root of a tree, and was going into the house for a gun, when I became anxious lest she should get away before my return; this likewise brought on the spasm; other states when my mind is much more affected will not bring it on." (*Works*, Vol. I., p. 336.) Hunter could tell an affecting story without experiencing any spasm; but it acted upon his power of articulation—he had to stop several times during its relation. Passion, as well as anxiety, affected his heart. "My life," he used to say, "is at the mercy of any scoundrel who chooses to put me in a passion."

The nerves supplying the heart may be so affected by emotion as to cause more violent contraction—tonic spasm—of the organ, which, from its occurrence in a vital part, is

followed by death. Whether this results from muscular irritability taking place in consequence of the withdrawal of an antagonistic nerve force, or from the direct action of nerve force upon the muscle, it may be difficult to decide. Be this as it may, it seems clear, in cases of death like Hunter's, that the condition induced is one of spasmodic contraction of the walls of the heart. Let us refer to the record of his death and *post-mortem*. When the governors of St. George's Hospital decided that no person should be admitted as a student without bringing certificates of having been educated in the profession (a regulation which appeared designed to exclude Hunter's countrymen), he advocated at the Board the admission of two young men, inadmissible under the new rule. His biographer, Mr. Palmer, states that, before the meeting, he expressed his apprehensions to a friend "lest some unpleasant dispute might occur, and his conviction that, if it did, it would certainly prove fatal to him." "Arrived at the hospital, he found the Board already assembled, and entering the room, presented the memorial of the young men, and proceeded to urge the propriety of their being admitted. In the course of his remarks he made some observation, which one of his colleagues thought it necessary instantly and flatly to contradict. Hunter immediately ceased speaking, retired from the table, and struggling to suppress the tumult of his passion, hurried into the adjoining room, which he had scarcely reached when, with a deep groan, he fell lifeless into the arms of Dr. Robertson, one of the physicians of the hospital, who chanced to be present. . . . Various attempts were made for upwards of an hour to restore animation, under the hope that the attack might prove to be a fainting fit, such as he had before experienced, but in vain; life had fled, and all their efforts proved useless. . . ." The *post-mortem* revealed a condition of the viscera such as might have been expected. The heart was found to be extensively diseased. It was small, appeared to have wasted, and was strongly contracted. On the left auricle and ventricle were two opaque white spots—the muscular tissue pale, and loose in texture. The coronary arteries were converted into long tubes, with difficulty cut across, and the mitral valves were much ossified. The aorta was somewhat dilated, and its valves thickened and wanting pliancy; the inner surface of the artery studded with opaque and elevated white spots. The pericardium was unusually thickened, but did not contain much fluid. The viscera of the abdomen and head were loaded with blood, and the carotid arteries within

the skull, and their branches, were thickened and ossified. (Palmer's Edition of Hunter's Works, Vol. I., p. 132.)

Tissot quotes from Water (Miscellaneous Natural Curiosities, pp. 162-298), the case of a military man, who, being about to possess the object of his desire, was so over-joyed, that he suddenly expired. A *post-mortem* examination was made, and the pericardium was found to be distended with blood, although no rupture of the heart could be discovered.

We have said that it is highly probable that, in such fatal cases as the foregoing, severe and persistent spasm of the heart is the cause of death. It seems equally probable, on the other hand, that the same fatal effect may follow from emotional excitement, inducing a very different condition of the muscular tissue of the heart. The organ ceases to contract upon its contents, and becomes dilated and powerless. These opposite conditions are seen in the voluntary muscles, and from like emotional causes; the hand being, in one case, rigidly contracted, or, in another, paralysed; and the result only differing from that of cardiac spasm or paralysis, in the circumstance of the heart being, and the hand not being a vital organ.

Tissot asserts that dilatation of the heart and the aorta has been caused by chagrin and by anger, and he refers for proof of the former to Bonnet, Morgagni, and others; and of the latter to Harvey, Zimmermann, &c.

The disturbance of the heart's action indicated by syncope is a common phenomenon as the sequence of emotional excitement, and it is easy to understand how in cases when the heart is healthy, nothing more serious may occur, but when it is diseased and has already quite enough work to perform, it succumbs to any strong or tumultuous passion. We find here, as in other instances, that similar results are produced by very opposite forms of emotion—joy and fear—both however agreeing in this, that they are sudden and intense.

Sudden joy, indeed, appears to have as decided an influence as fear or grief. It might hardly have been supposed that if we take two persons, and subject one to the operation of a depressing, the other to that of an elevating passion, the former may remain calm, and the latter faint away. Yet in many instances such is the actual result. Lord Eglinton informed John Hunter that when two soldiers were condemned to be shot, but one was to receive a pardon, the event being decided by their throwing dice, usually the one who proved successful—thus procuring a reprieve—

fainted, while the one to be shot remained calm. In this case it would seem as if the mind having been screwed up (so to speak) to the highest pitch of suspense, at once collapsed, when no subject calculated to occupy it or rivet the attention, either of present or future interest, presented itself. Whereas, when a dreadful fate was impending, the mind was aroused to contemplate it, and syncope averted. It may perhaps be said that the pungency of some painful emotions really prevent fainting, while a pleasurable emotion relaxes the system and favours it. That intense pleasure may induce a fainting fit is illustrated by the case of Lucretia Davidson, the precocious American poetess who died æt. 17. "Her susceptibilities were so acute and her perceptions of beauty so exquisite as to cause her to faint when listening to some of her favourite melodies from Moore. Yet notwithstanding this serious impression, she would beg to have them repeated, so delicious were the sensations produced." (Dr. Kellog, "American Journal of Insanity," Jan. 1855, p. 219.) The influence here was, however, no doubt of a mixed character, both emotional and sensational; the former element, nevertheless, was the proximate cause of the heart's temporary failure.

We often see that the above mentioned stimulus of fear prevents fainting for just so long as it operates, and that directly it is withdrawn the system yields to a reaction. Persons perform deeds of heroism in the immediate presence of danger, who do the right thing after the danger is over—swoon away. So familiar a fact may seem scarcely to deserve an illustration, but the following related by Hunter ("Posthumous Papers") is so much to the purpose that we cannot omit it. "A lady sitting up after everyone was gone to bed, saw her door open, and a servant of the house come in with a pistol in his hand. She immediately blew out the candle, pushed the bed from the wall, and escaped between them. The servant in the dark pushed down the table she had been sitting by. This discomposed him; she came out of her hiding place, got out at the door, and had the presence of mind to lock it. She awoke the house, and as soon as she found assistance or was secure, *she fainted*, and none knew what was the matter till she came to herself. The man was secured, and it was found that he was out of his senses." (Vol. 1., p. 265.)

Joy caused actual death, according to Hume, at the restoration of Charles II. Dr. Rush says, there was a time when he doubted the truth of this assertion, "but," he adds, "I

am now disposed to believe it, from having heard of a similar effect from an agreeable political event, in the course of the American Revolution. The door-keeper of Congress, an aged man, died suddenly, immediately after hearing of the capture of Lord Cornwallis's army. His death was universally ascribed to a violent emotion of political joy. This species of joy appears to be one of the strongest emotions that can agitate the human mind." (Works, vol. 1., p. 132.) In this case and in the following, it is more than probable that death was the result of cardiac and not cerebral mischief.

A curious and sombre incident is reported from the gaming table of Köthen, in the Principality of Anhalt. A middle-aged man entered the room, and sat down to play. After a run of great luck, his winnings had augmented to the sum of a thousand ducats—equal to nearly five hundred pounds sterling—which the croupier pushed over to him. The fortunate gambler did not appear very anxious to have the gold and notes, and made no response when he was asked if he wished to continue playing. One of the servants of the establishment touched him upon the shoulder to draw attention to the unheeded winnings, and to the croupier's question, but the man remained strangely immovable; and when they came to look closer, they found that he was dead. He had "passed" like the red! *Rien ne va plus* had proved true of himself, as well as of the last roll of the ball. Was it his good luck that had been too much for him? A thousand ducats is a pretty sum, the thought of which varies doubtless in proportion to the state of a pocket—but it seems hardly adequate to kill a man under any circumstances. At all events the gambler was dead—some sudden "click" in the mechanism of life had spoiled the works, and made the subtle pendulum of being stop in its mid-swing. Even such a grim comment upon the worship of Mammon did not take away his presence of mind from the chief priest of the temple. The croupier no sooner perceived that Death had backed "zero," and won, than he raked the dead man's gold and billets back into the bank, declaring that a corpse could have no engagement or rights. The heirs of the defunct gamester are not satisfied with this axiom, and have commenced an action for the recovery of the sum.—(*Daily Telegraph*, March 7th, 1870.)

Dr. Carpenter explains the mode in which emotional shock destroys the heart's action as follows:—"Just as electricity developed by chemical change may operate (by its correlation with chemical affinity) in producing other chemical changes elsewhere, so may nerve-force, which has its origin in cell-formation, excite or modify the process of cell-formation in other parts, and thus influence all the vital manifestations of

the various tissues, whatever may be their own individual characters." After applying this law to the influence of mental states upon the properties of the various tissues and the composition of the secretions, he proceeds, "Further, it not only appears that a simple withdrawal or disturbance of the nervous force supplied to particular organs, occasions a retardation or perversion of their vital operations; but there also seems evidence that an influence of an *opposite kind* may be transmitted through the nervous system, which is positively and directly antagonistic to the exercise of the vital powers of the several tissues. Such at least appears to be the only legitimate mode of accounting for the extraordinary effect of "a shock" physical, or mental, in at once and completely destroying the contractility of the heart, and in bringing to a stand the vital operations of other parts. If the nervous force be regarded as a *polar* force, analogous in its mode of transmission to electricity, it is not difficult to understand that the reversal of the usual direction of its action may produce the effects in question; especially when it is borne in mind that the *direct* and *inverse* electric currents (as shown by Prof. Matteucci) exert opposite influences upon the nervous excitability." (Human Phys., p. 346.) In regard to the idea that the nervous force is polar in character, it certainly is in accordance with the character of the transmission of emotional influences; this transmission being the result of "a molecular change," taking place instantaneously along the nerves, in consequence of "a disturbance in the polar arrangement of its particles, at one extremity, which causes a similar disturbance to manifest itself at the other. Thus if

ab ab ab ab ab ab ab ab

represent the arrangement of the particles in this condition of equilibrium or quiescence, and this condition be disturbed at one extremity, by the operation of a new attraction upon the first particle *a*, a new arrangement will instantaneously take place throughout; this may be represented by

a ba ba ba ba ba ba b

which shows *b* in a free state at the opposite end, ready to exert its influence upon anything submitted to it." (Op. cit., p. 354, and Todd and Bowman's Physiological Anatomy, vol. 1, p. 240.)

We have spoken of the influence of the lachrymal secretion

as an outlet for emotional excitement. When this is arrested the bodily organs, as is well known, suffer, and the heart appears to be the first to receive the shock; cases of death are on record which appear to be referable to this cause.

In cases of exclusively cardiac paralysis, the balance, as Dr. Richardson would put it, between the heart and lungs, is broken on the circulating side, and we may have the illustration he adduces, that of cardiac apnoea, in which this disturbance of the normal equilibrium is exhibited. The respiratory apparatus intact and in full play, the patient breathes into lungs almost anæmic, and the tissue is more or less injured. "In one case of sudden death from this affection," observes Dr. Richardson, "I found the bloodless lungs as white as milk, and so infiltrated with air as to distend the chest walls, and to resist being emptied of air by the firmest pressure of the hand." (*"Medical Times and Gazette,"* Feb. 2, 1867.)

In some cases of death from emotional excitement, it is impossible to be certain that the heart has been the first organ to suffer; but it may be deemed highly probable, in the following instances.

The "*Medical Times and Gazette*," of July 28th, 1866, under the head of "Death from fear of an operation," reports a case of death from apprehension; the more remarkable because the sufferer appeared to be in nowise a nervous person.

A distinguished veterinary surgeon, about 60 years of age, of good constitution, and possessed of great moral force, had suffered for a considerable period from multiple stricture of the urethra and a highly irritable bladder. After the urine had become purulent and ammoniacal, the presence of four calculi was ascertained. In the hopes of being able to perform lithotrity, M. Cazenave persevered for a considerable time in an endeavour to relieve this painfully spasmodic condition of the urethra. These attempts were most courageously borne by the patient, but he was excessively disappointed when informed that lithotrity, which he was very desirous of undergoing, was out of the question, and that some form of lithotomy was the only operation that was eligible. Of this he was known to entertain a great dread, but nevertheless, at once gave his consent to its performance, retaining to all appearance his habitual calmness. The patient having been placed and held in position by the assistants, M. Cazenave was on the point of introducing the catheter, when the patient, who had exhibited entire calmness and serenity during the preparations, was observed to become pale and faint, and in the course of ten minutes, in spite of all that was done, he died.

Dr. Currie, of Edinburgh, engaged to perform *paracentesis abdominis* in the case of a woman labouring under ascites. On entering the room the patient fainted. On attempting to restore her, he found she was dying. "She died of a sudden paroxysm of fear." (Rush. op. cit., vol. ii., p. 114.)

We are not aware that in any work on Forensic Medicine, the question is discussed whether death can arise from chagrin. That it is one of practical importance may be seen from the following case which appeared at the time it occurred in the "Gazetta Med. di Torino," Jan. 27, 1868, and the "Medical Times and Gazette," Feb. 22.

A station-master of one of the Italian Railways, 55 years of age, and in robust health, was awakened one morning with the news that his station had been robbed. He felt his responsibility so acutely that he immediately became ill, and died within 24 hours, all the assurances of his superiors and encouragements of his relatives failing to re-assure him. There was utter prostration, spasmodic action of the stomach, with obstinate vomiting, hollow voice and failing pulse; consciousness continuing to the last.

The railway administration, in a circular to its *employés*, narrated the facts, and offered its homage to the honourable susceptibility manifested by the deceased. It was also determined that his widow was entitled to her pension, her husband having met his death as an immediate consequence of his service. The railway being in the hands of the government, the court, whose duty it was to carry out this decision, demurred, and ordered that the widow should only be paid an indemnity of 1,944 *lire* (£80). She appealed against this as an unjust judgment, and the case was referred to Signor Laura, Professor of Legal Medicine in the Turin University, to report upon. This he does at some length, but we can only present his chief conclusions:—

1. That sudden mental emotion may induce death within a brief space of time, or even immediately, and that, in persons in robust health, is a fact freely admitted in science.

2. The physical phenomena induced by such moral cause indicate a deep perturbation of the nervous system, and are generally of a dynamic character.

3. The intimate connexion of the mental emotion and the fatal result, in this case, is shown by the facts that the evening before, the patient was perfectly well, and that, awoke from a tranquil sleep by the, to him, dreadful news, he immediately became ill. No other possible cause could be assigned for the train of symptoms that followed, as the action of his heart prior to this illness was known to have been in a healthy condition.

4. The fact of death being delayed for 24 hours is no proof that it was not caused solely by the mental emotion. In analogous cases,

such as death from lightning or from poison, death, usually sudden, may be delayed in some individuals. Mental emotions may not always operate with the same force, and may meet with a varying amount of resistance, and there are also various conditions operating, which the present state of science does not enable us to appreciate correctly. It is very possible that had the news been brought to the patient during the time when his mind was occupied with his duties in place of just waking from sleep, his powers of resistance would have been greater.

Professor Laura's conclusion, therefore, was that the man had undoubtedly died solely from mental emotion, induced by his great anxiety for the safety of the property, no preceding or accompanying cause of death being present. The Court of Appeal agreed in this opinion, which was also approved by the Faculty of Bologna, *and the pension was decreed to the widow as if her husband had been killed while performing services for the company.*

Blood vessels.—Passing from the heart to the muscles by which the supply of blood to the body is regulated, we find them to be strikingly influenced by emotional states. The attention directed, during the last few years, to the muscular tissue of the blood vessels and the vaso-motor nerves has thrown great light upon this long-observed fact. The pallor induced by fear, the crimson blush of shame, are psychophysical phenomena universally recognized, and indicate the remarkable local vascular changes caused by various feelings of the mind, independently of the general disturbance of the circulation which emotional excitement may produce, by acting as already described upon the heart itself. The influence of emotion on erectile tissue belongs to the same class; in fact, the increased action of the heart and rapidity of the general circulation is in this instance actually antagonistic to local hyperæmia. Cl. Bernard's demonstrations of two distinct circulations—the cardiac and the capillary—the latter being directly controlled by the nervous system and acting “separately upon each individual spot of the body,” are applicable here. They help us to understand how some parts of the system may remain in their ordinary condition, while others are morbidly affected or exhibit certain physiological phenomena. This holds good of both kinds of capillaries—those which transmit the blood from arteries to veins, and those which are in immediate contact with and influence the histological elements of the tissues.

Language derives many figurative expressions from this source, of which the German word for blushing—*schamröthe*—is a striking example. In our own language there is no

corresponding term, but the man who never blushes in his life, and never will, finds when he is charged with a shameful act no stronger expression for the denial of it, than "I should blush to do it."

Increased vascularity under the influence of emotion, chiefly when sudden, frequently causes extravasation, or rupture of the small blood vessels. Such cases must not, of course, be confounded with those in which violent contraction of the voluntary muscles occasions injury to the vessels imbedded in their tissue, and consequent effusion of blood. As vascularity, whether with or without extravasation of blood, forms one of the prominent signs of inflammation, it follows that the illustrations given will more or less merge into examples of an inflammatory condition of the part, attended by swelling, tenderness, and heat. In all, however, the influence of mental states upon the blood vessels is exhibited.

In illustration of the influence of fear or apprehension upon the vascular system, I shall first give the following example,* the case of a highly intelligent lady well known to myself. Although the emotion had for its object another person, it none the less acted upon her own system :—

One day she was walking past a public institution, and observed a child, in whom she was particularly interested, coming out through an iron gate. She saw that he let go the gate after opening it, and that it seemed likely to close upon him, and concluded that it would do so with such force as to crush his ankle; however, this did not happen. "It was impossible," she says, "by word or act, to be quick enough to meet the supposed emergency; and, in fact, I found I could not move, for such intense pain came on in the ankle, corresponding to the one which I thought the boy would have injured, that I could only put my hand on it to lessen its extreme painfulness. *I am sure I did not move so as to strain or sprain it.* The walk home—a distance of about a quarter of a mile—was very laborious, and in taking off my stocking, I found *a circle round the ankle, as if it had been painted with red-currant juice, with a large spot of the same on the outer part.* By morning, the whole foot was inflamed, and I was a prisoner to my bed for many days."

A very interesting example of a local affection, caused by an excited imagination, is reported by Tissot, on the authority of Hoffmann. A man believed that he saw, and was seized by a spectre, and was terribly frightened. One of his feet immediately became red, and inflamed, and afterwards suppurated. He became also convulsed and delirious. It is not stated dis-

* See also "Manual of Psychological Medicine," 2nd Edit., p. 174.

tinctly whether he fancied the spectre seized him by the affected foot. If such was the case, the narrative would derive additional interest from the circumstance that the site of the bodily affection was determined by, and corresponded to, the locality imaged in the mind. The fact, in any case, remains that fright produced inflammation and suppuration of one of the feet. (Hoffmann: *Morb. Conv.* 1681. Tissot: *Annales Medico-Psychologiques*, Sept., 1865, p. 164.) The same authority records the case of a young man who was thrown into a passion, when his left ankle became swollen and painful. The knee became similarly affected, and subsequently other parts of the body were peculiarly affected.

Fear during sleep is stated to have caused local inflammation, corresponding with the image present in the mind in a dream. In the "*Bibliothèque choisie de Médecine*," by Planque, tome vi., p. 103, is the following case:—A man, thirty years of age, healthy and robust, saw in a dream a Pole with a stone in his hand, which he threw at his breast. The vivid shock awoke him, and then he found that there was on his chest (*dans le même endroit*) a round mark, having the appearance of a bruise. Next day there was so much swelling, &c., that a surgeon was requested to see it, who, fearing a slough, scarified the part, and relieved it. The wound healed in a short time. Without more definite information it would not be safe to build a theory upon this case, but looking at the previous case of the spectre, and others equally well authenticated, there appears no reason to doubt that the dream and the inflammatory action of the skin stood in the relation of cause and effect. Had there been anything incredible in the dream acting the part of the former, we might have thought it possible that the man had unawares received a blow in the region of the bruise the previous day, and that it had suggested the dream. Its admission as evidence must then be determined by the authenticity of other examples, whether occurring when awake or during sleep.

In a case recorded by Lauzanus, fear produced signs of local vascular disturbance. A young woman witnessed the lancing of an abscess in the axilla, and immediately experienced pain in that region. This was followed by inflammation and a decided swelling. (Demangeon: *op. cit.*, p. 154.)

It may at first sight seem an extraordinary, almost incredible thing, that the action of the emotions should produce inflammation in any clearly circumscribed spot, that spot being determined by the direction of the thoughts at the

moment; but facts of the same kind, though less striking in their results, are familiar to all. Thus, no one would regard it as remarkable, that on picturing oneself in a dangerous position—the foot, for instance, caught in a man-trap—the limb should start spasmodically, or experience a sensation of discomfort or actual pain. Yet so simple a phenomenon involves the same principle as the other more striking fact—the localisation of thought or emotion in the body, indicated by some external sign more or less marked according to the age, sex, constitution, or health.

Although anticipating the section in which we shall consider the influence of the intellect upon the body, we may observe that the fundamental principle upon which the class of phenomena now under consideration depends appears to be this: that the mere circumstance of thinking of any part of the body, from whatever cause originating, tends to produce an effect upon it as regards afflux of blood and innervation. Motion or sensation, or both, occur in the locality to which the thoughts are directed; but this effect is greatly intensified if accompanied by a powerful emotion.

Simple as this law is, it does, in fact, embrace and explain numerous facts which appear at first sight inexplicable, or to require more complete explanation.

Thus, if I see an injury done to the limb of another, my thought is turned to it, and by an inevitable association of ideas, based, in this case, on the great fundamental law of self-preservation, it is also directed to my own limb, and naturally to the corresponding one. Hence some effect is almost sure to follow—whether slight, or so decided as to leave its mark upon the tissues, or cause intense pain, must depend upon the force of the impulse conveyed from the brain or the sensibility of the individual's system.

We thus have several laws brought into operation in cases of this description. In addition to the general law that mental emotion of any kind produces an effect upon the bodily system, we have the special one that the direction of the thought to any organ or tissue of the body induces increased action of the part. Further, there is that which applies to the cases here reported, the greatly augmented influence communicated by emotion.

The evidence which can be adduced to establish a concurrent affection between the same limb or region of our own body as that of another person upon which our imagination is riveted, is confirmed by the movements, *not* hidden from the view, which we instinctively perform. Thus, if we observe a man

receive an injury to any part of the body, we instantly apply our own hand to the corresponding part of our own body. It may be said this is the consequence of a sensation of a painful kind experienced by ourselves in the part. Possibly, but if so, the explanation is itself a proof of the position we seek to maintain. If, on the one hand, these *external* movements constitute an independent series of facts, it may be inferred from the relation existing between them, the image in the mind of a certain person's limb, and our corresponding member, that a like relation may exist between the two latter factors and *internal* movements. In this connection it is also curious to observe how constantly it happens that, without the occurrence of any accident calculated to direct the attention strongly to a particular limb of another person, we assume the attitude of the person we are conversing with. A places his arms akimbo; B automatically does the same. A scratches himself; B follows his example. Hence the contagion of bad habits; hence the importance of good example. But the bearing of these every day facts upon the subject under consideration is simply this: if there be so marked a change in the outer man corresponding with another person's condition, there is no reason to doubt an analogous change in the inner man. Call it imitation, or sympathy, or imagination, or what you will, the power which it exercises is so obvious in those parts of the body which can be seen, that we can have little difficulty in inferring changes from the same cause in those parts which cannot be seen. If A's hand is instinctively placed on the breast when he sees B plunge a dagger in his, there is every reason to believe that there may be hidden movements in the muscular coat of the vessels, not less definite, and resulting from a common law.

The skin.—Cutis anserina and horripilatio are the well known effects of emotional excitement, especially fear, on cutaneous muscle. The latter is no doubt assisted by the action of the occipito-frontalis in producing constriction of the scalp, but this could not cause the phenomenon of "the hair standing on end," without the contraction of the involuntary muscular fibre surrounding the roots of the hair.

Eliphaz and Æneas alike afford familiar illustrations of this phenomenon. Fear came upon the Temanite when he saw in his dream a mysterious, unearthly figure, and he says that as it passed before him "the hair of my flesh stood up." The Trojan, frightened by the shade of Creusa, tells the same story, "obstupui, steteruntque comæ."

Under this section, cases of *sanguineous perspiration* should be enumerated. I can, however, only refer to one well-marked case of the kind—that of a sailor, aged 30, who was so alarmed by a storm that he not only fell on the deck speechless, but on going to him, Paulini observed large drops of perspiration of a bright red colour on his face. At first, he imagined that the blood came from the nose, or that the man had injured himself by falling; but on wiping off the red drops from the face he was astonished to see fresh ones start up in their place. This coloured perspiration oozed out from different parts of the forehead, cheeks, and chin; but it was not confined to these parts, for on opening his dress he found it formed on the neck and chest. On wiping and carefully examining the skin, he distinctly observed the red fluid exuding from the orifices of the sudoriparous ducts. So deeply stained was the fluid that on taking hold of the handkerchief with which it was wiped off, the fingers were made quite bloody. As the bloody perspiration ceased, the man's speech returned." ("Jones's Nerv. Funct. Disorders," p. 61.)*

Trachea and Bronchi.—Here should be enumerated cases of spasmodic croup and spasmodic asthma when excited by emotional causes; "nervous cough," occasioned by anxiety or nervousness, might be added. Public speakers frequently suffer from this annoyance *before* speaking, but are quite free from it when once they commence. This is not to be wondered at when even an experienced orator like Mr. Bright said only the other day, that he never came to a public meeting to deliver an address without "fear and trembling." We have already trenched upon this section when speaking of the spasm of the larynx (p. 378), and merely adding that dyspnoea is notoriously induced or aggravated by emotion, we pass on to affections of the alimentary canal.

Œsophagus, Stomach and Intestines.—We may refer in the first place to a few figurative expressions which are of interest in this connexion. Thus Shakspeare in *Hen. VI*:—

"I may revolve, and *ruminate* my grief."

We speak of the *sickening* recital of the details of a crime, from the acknowledged influence it possesses in producing a

* The interesting fact has just been recorded by Mr. Frank Buckland, in "Land and Water," that a hippopotamus, being excessively savage after her confinement, perspired profusely, the perspiration being the colour of blood. Professor Gulliver found on examination that it contained numerous blood-corpuscles.

state of nausea, which if aggravated would lead to actual vomiting. That hope deferred maketh the heart "*sick*," is a proverb as true as it is ancient :—

"I feel such sharp dissension in my breast,
Such fierce alarums both of hope and fear,
As I am *sick* with working of my thoughts."

HEN. VI., ACT. V., SCENE V.

The effect produced upon the abdominal region by the emotions is recognized in the interchangeableness of the terms employed in all languages to signify the physical and the mental state, and we may allude to them here although belonging also to the section on sensation. In the oldest historical work extant we read that "Joseph made haste, for his *bowels* did yearn upon his brother; and he sought where to weep." The Heb. ספגת is literally rendered in the authorized version; the association of the two ideas is therefore met with, as might be expected from its foundation in nature, in the language of the early no less than in the later ages of the human race; popular language being largely justified by, though needing qualification from, the anatomical and physiological teachings of the present day. The Greeks made use of the same metaphor. In the above passage, for example, the word employed in the Septuagint* is *εγκατα* or (as in the Oxford M.S.) *σπλάγχνα*, the intestines or bowels, the word which frequently occurs in the writings of St. Paul, as in the expression rendered by our translators "bowels of mercies" (*σπλάγχνα οίκτιρμών*) and "straightened in your own bowels." Hence, by a curious interchange of ideas, along with virtual identity, the tenderest emotions are represented in the same language as that which is employed to describe the physical circumstances attending the death of Judas Iscariot!

From profane Greek authors similar examples might be cited, but the foregoing are sufficient to mark the connection which every one's consciousness and observation, have in every age recognized between the emotions and certain abdominal organs, and which the language of the anatomist also acknowledges when he speaks of the *splanchnic* nerves of the *sympathetic*.

As regards loss of motor power, it may be observed that emotional shock does not cause paralysis in the course of the alimentary canal so frequently as in that of the respiratory track, but doubtless many instances do occur. Romberg,

* The LXX in Prov. XII, 10, render it by *σπλαγχνα* (bowels, *i.e.* tender mercies).

speaking of paralysis of the œsophagus, remarks that it has been occasionally observed associated with dumbness or aphonia as a result of violent mental emotion, and refers to the works of Joseph Frank (*Prax. Med.* vol 1., p. 126), but I am unable to verify this reference.

Under this head some cases of hysterical tympanites might be given. One will be found in the "*Medical Times and Gazette*," for Dec. 10, 1859, in which the disorder was certainly of emotional origin, although not the immediate result of mental shock. Dr. Anstie, in observing that psychical influence in such cases probably acts through the splanchnic nerves, states that the course of their action beyond the thoracic sympathetic, and towards the cerebro-spinal centre is not certainly known. Petrowski believes there are two motor systems for the intestines, the circular fibres supplied by the pneumogastric; the longitudinal supplied by the splanchnic. (*Biennial Retrospect 1865-6*, New Syd. Soc.)

Digestion is affected by the contractions of the muscular coat of the stomach as well as by the amount and character of the gastric juice, and therefore the disturbance of this process which so often results from emotional changes is due, in part, to abnormal contraction of these muscular fibres. Dr. Carpenter cites from Brachet the experiments upon the pneumogastric nerve in which "some hours after section of the nerve on both sides, the surface only of the alimentary mass was found to have undergone solution, the remainder of the mass remaining in the condition in which it was at first ingested," and he observes that "the moderate excitement of pleasurable emotions may be favourable to the operation, not only by giving firmness and regularity to the action of the heart, and thence promoting the circulation of the blood, and the increase of the gastric secretion, but also in imparting firmness and regularity to the muscular contractions of the stomach." (*Human Physiology*, p. 408.)

Of the influence of emotion in increasing the peristaltic action of the intestines, the ordinary effect of fear and fright affords the readiest illustration. The simple result of this muscular contraction—the discharge of the contents of the bowels—is rarely unmixed with increased secretion from the intestinal glands, and therefore we shall have to return to the consideration of these effects when we speak of secretion and excretion. It must be noted here, however, that the involuntary muscular fibres of the gland ducts which discharge themselves into the alimentary canal are acted upon and contribute to the resulting diarrhœa.

Under the division "Spasmodic cholera," Dr. Copland enumerates among the pathological changes increased action of the *muscular* coats of the stomach, small intestines, the gall bladder, liver and common duct; the fatal issue being mainly due to the exhaustion of the vital manifestations of the sympathetic nerves, and the profuse discharge.

This appears to be the proper place to refer to cases of icterus, which probably arise from spasm of the gall duct. Dr. Watson says, "Certainly, the *pathemata mentis* play their assigned parts; fits of anger and of fear and of alarm have been presently followed by jaundice. . . . Mr. North witnessed a case in which an unmarried female, on its being accidentally disclosed that she had borne children, became in a very short time yellow. A young medical friend of mine had a severe attack of intense jaundice, which could be traced to nothing else than his great and needless anxiety about an approaching examination before the Censors' Board at the College of Physicians. There are scores of instances on record to the same effect."

Dr. Watson seems inclined to connect the icteric and mental symptoms with spasmodic constriction of the gall-ducts, and does not adopt Mr. Mayo's suggestion that jaundice in such cases is due to the influence propagated through the nerves causing the formation of bile in unusual and rapid amount in the blood. ("Lectures on the Principles and Practice of Physic," vol ii., p. 557.)

Shakspeare recognises the truth of the occurrence of icterus in consequence of mental states, in the "Merchant of Venice," Act 1, Scene 1:—

"Why should a man whose blood is warm within,
Sit like his grandsire cut in alabaster?
Sleep when he wakes? and creep into the jaundice
By being peevish?"

In the "British Medical Journal" for November 19, 1870, is the report of a case of "Jaundice after anxiety," by Mr. T. Churton, of Erith:—

"A married lady, æt. 30, had an attack of jaundice October, 1868, after mental and physical fatigue. The ordinary remedies were used, the nitro-muriatic acid being the most useful, but the discoloration persisted for some weeks. Six months afterwards she had another attack, which appeared to arise from similar causes. She had several visitors staying in the house, and having little inclination for society, was somewhat disturbed by attending to them, and by the addition to the ordinary cares of the household. In the midst of this anxiety, one of her children, subject to asthma, had a severe attack one evening, and

was in considerable distress all night. Next morning, at five o'clock, I found her sitting up in bed, rocking to and fro, and complaining of acute pain in the hepatic and gastric regions. Pulse 72; temperature 98·4 deg. She showed slight but unmistakeable symptoms of hysteria—quivering eyelids, &c. Ten grains of bromide of potassium were given, therefore, every four hours. The first dose cured her of all pain at once. On the following day, however, I found her completely jaundiced, and the urine of a dark brandy colour. The bromide was continued, but less frequently, and an aperient given. Next day the jaundice was less intense. Two days after the yellowness had entirely gone, and the urine was of a natural colour."

Mr. Churton adds,—“I do not pretend that the aperient pill had nothing to do with this rapid recovery, but, on the other hand, we know how little purgatives avail in such cases. Neither do I think they would have availed anything in this case, had not that condition of the nerve-centres upon which (no matter how) the jaundice ultimately depended been first, as it were, neutralised by the bromide. Nevertheless, I should have laid little stress on a single case, but that Mr. Jessop, of Leeds, to whom I am indebted for the suggestion of this plan of treating nervous jaundice, tells me that he has several times used the bromide with equal success.”

Ureters, Bladder, and Urethra.—We shall only notice here the familiar effects of fear, &c., in causing spasm of the expulsor muscle of the bladder inducing urgent micturition. The following is a good example:—“A Judge of the Criminal Courts related to me [Romberg] that a man, convicted of highway robbery and murder, who was executed some years ago in the town, before mounting the scaffold, prayed to be allowed to gratify the urgent desire to micturate. Even certain mental impressions are capable of inducing a greater inclination to frequent contractions of the vesical muscles, as in other instances they affect the muscular fibres of the rectum. We occasionally meet with hypochondriacal patients who think of nothing else but the state of their evacuations. I have had a gentleman of this description under my care, who always remained in the vicinity of his house when he took a walk, in order to be able at once to follow the call of nature. There was another who had heard that the formation of calculus could be prevented by frequent micturition; after the impression had ceased to harass him, he was still often reminded of it by an annoying sense of strangury.” (“Diseases of the Nervous System,” vol. ii., p. 31.)

Fallopian Tubes, Uterus, and Vagina.—Under this head we shall only refer to the fact familiar to every general practitioner of the influence of violent emotion in causing mis-

carriage, and arresting uterine contraction during labour. Hence, if an accoucheur leave his patient and another take his place, the progress of labour is generally impeded; uterine contraction ceasing for hours. Yet medical men often strangely forget the importance of avoiding unpleasant mental impressions under such circumstances. I have known an accoucheur, devoted to natural history, improve the occasion by coolly bringing out of his pocket an adder which he had just secured in one of his country walks. I believe the patient did not find the exhibition so useful as to make her particularly desire to have the same medical attendant again.

Dr. Gooch records the case of a lady whom he attended, who with great difficulty was persuaded to marry, in consequence of an imagination that she would certainly die, should she become pregnant. Such was the influence of this apprehension upon the course of the labour, that, in spite of all the encouragement Dr. Gooch gave her, it interfered with its progress in so marked a manner as to protract it to a period of thirty-six hours.

The death of the Princess Charlotte, acting on the imagination of women similarly circumstanced, injuriously retarded labour in many instances. Dr. Gooch's practical conclusion is, "In this state of mind we must keep up the spirits of our patient, both during pregnancy and at the time of labour, by anecdotes of the most favourable accouchements of those who have entertained equal apprehensions, and by every species of encouragement in our power."* (*"A Practical Compendium of Midwifery,"* p. 181.)

(To be continued.)

* Referring to the case of (so called) Emotional Paralysis, given in the Jan. number of this Journal (p. 558), I am able to add, through the kindness of Dr. Lockhart Clarke, a report of his examination of the brain. The pia-mater generally was very much thickened. The grey substance of the convolutions had an unusually pink colour. On the *right* side from behind forward through the posterior and middle lobes, nothing more unequal was observed until reaching the optic thalamus. At the deeper part of this body, and in the cerebral substance, on its outer side, there was a great deal of red softening. Patches of red softening were also found at the anterior part of the corpus striatum. On the *left* side of the brain there was found, in the middle of the optic thalamus, a cavity or cyst about the size of a pea, and containing a yellowish fluid outside the thalamus, the cerebral substance was softened, reddish-black in colour, and infiltrated with fluid, which, under the microscope, was found to be loaded with exudation, or compound granular corpuscles. The cerebral matter itself contained these bodies in abundance, besides a vast number of molecular particles. In the central white substance of the cerebellum, around the corpus dentatum on each side, there were two or three small cysts. One of them contained a perfectly milky fluid, which consisted of fat and oil-particles. The medulla oblongata was softened and unhealthy along the fourth ventricle. Nothing remarkable was found in the spinal cord.

Madness in Animals. By W. LAUDER LINDSAY, M.D., F.R.S.E.,
Physician to the Murray Royal Institution [for the Insane],
Perth.

"There are many *errors*, which are easy of conception; and many *truths*, which task us severely" (p. 172).

"It is more probable that a *law*, already found to extend without exception over all the phenomena hitherto accurately studied, is also operative in the phenomena not yet clearly known, than that, in these unknown cases, a new law should be in operation" (p. 169).

Lewes: in "Blackwood's Magazine" for February, 1861.

If the term *insanity*, as applied to man, is one that it is difficult, if not impossible, accurately to define;—if *human* insanity includes a great number of the most diverse mental and bodily conditions or phenomena,—the term *madness*, as applied to other animals, is still more vague and unsatisfactory in its definition, and *animal* madness includes a much more heterogeneous group of the most opposite kinds of maladies. While the said term madness has been borrowed by veterinarians from human medicine, it is evidently regarded in a different signification when applied to other animals than man. So much so, that while the character of the mental phenomena in certain diseases of the lower animals must be, and is, admitted by all veterinarians, they deny, nevertheless, their parallelism to those of insanity in man, on the ground that animals have not sound minds, and cannot, therefore, possess unsound ones! Such a belief merely illustrates the utter ignorance and prejudice regarding the mental constitution of animals, which appear to be characteristic of *veterinarians* as a class.*

In the older works on veterinary science, animal madness is merely a synonym for *rabies*. Thus Blaine's† long chapter on madness refers exclusively to *rabies*.‡ Physicians of the present day also speak of canine madness as synonymous

* Dr. Cobbold has lately shown ["British Medical Journal," January 28, 1871, p. 100] how utterly *untrustworthy* are veterinarians and butchers in matters passing daily under their notice; in those relating, for instance, to the entozoic diseases of meat.

† Blaine was himself bred to the medical profession; a circumstance that gives the greater weight or importance to his observations on the mental disorders of animals.

‡ "Canine Pathology," 1817, p. 76.

with rabies.* Naturalists have used the word in a similar sense. Thus when Linnæus speaks of the dog *spreading its madness*,† he probably refers to rabies being propagable by the diseased saliva of the animal. Unquestionably, *mental* disturbance—frequently amounting to insanity—is an accompaniment of animal rabies, just as it is of human hydrophobia.‡ There is, for instance, a parallel series of *mental* symptoms in the hydrophobic child§ and rabietic dog.|| Blaine speaks of *alienation of mind* in rabies (p. 109), and describes among its prodromata—treacherous disposition, peculiarities of habit and manner, perverted appetites, antipathies, peevishness or irritability (p. 104). He also speaks of “total alienation of mind” as accompanying fits (convulsions and epilepsy) in the rabies of the cat (p. 176). Prof. Aitken describes, as characteristic of human hydrophobia, a *rabidity*¶ which consists of “paroxysms of *phrensy*, or of uncontrollable impulsive violence.”** There is marked *sensory* disturbance—touch, sight, and hearing being chiefly affected. Thus we find “spasmodic catching of the breath consequent even on touching the lips with any liquid. Subsequently the eye and

* (*e. g.*) Professor Aitken in his “Science and Practice of Medicine;” 4th ed., 1866, Vol. i., p. 679.

† Jesse’s “Anecdotes of Dogs,” 1867, p. 74.

‡ There is much confusion in the use of the terms *rabies* and *hydrophobia* by different writers—medical or veterinary. By some, the first is restricted to animals—the second to man; while, by others, they are used indiscriminately and synonymously. Professor Aitken, in his “Science and Practice of Medicine” (Vol. i., p. 67), uses the terms synonymously; while on p. 672 he distinguishes rabies as the disease of the dog, and hydrophobia as that of man. Inasmuch as it is unquestionably the *same disease* that occurs both in man and the dog, the use of two appellations is not only unnecessary, but mischievous. That which is the most objectionable in its etymology and application is the term *hydrophobia*, which it would be well, therefore, henceforth to give up as inappropriate. Some writers (*e. g.* Sauvages, in 1769) restrict the term to the single *symptom*—dread of water, inability or refusal to swallow fluids.

§ In Poland, hydrophobia in man appears to be regarded as a *form of insanity*. At least we are told that “The Lunatic Asylum at Warsaw receives every year a certain number of persons who have been bitten by dogs suspected of being mad, during July and August. The number of these individuals sent there by the authorities on the ground of possible development of hydrophobia amounts sometimes to as many as 20.” (“Med. Times,” Vol. ii. for 1858, p. 486.)

|| Among symptoms in the *sheep* [pregnant ewes] are “extraordinary and unnatural solacity, in which the manner, and gesture, and sounds, of the male were closely imitated; followed by unhealthy appetite—swallowing wood, straw, dung, &c.—intense pugnacity and frenzy.” (“Med. Times,” Vol. i. for 1863, p. 616.)

¶ Similar mis-application of the terms *rabid* and *rabidity* is not uncommon among medical writers. Thus Prof. Laycock applies the word *rabid* to the delirium of malignant pustule in animals [“Edin. Med. Journal,” November, 1856, p. 367], and it is frequently in a similar way applied to delirium or mania utterly unconnected with *rabies*.

** “Science and Practice of Medicine.” (*Op. cit.*, p. 672.)

ear become distressed by every ray of light or impulse of sound ; likewise the sense of touch is most painfully excited on the slightest breath of air passing over the surface of the body." Moreover, *mental* derangement is associated with, if it does not lead to, *motor* disturbance ; for we are told that "in a still more advanced stage, the suspicion, the irritability, the violence, and generally the outrageous and uncontrollable derangement of *mind*, which often seizes the patient," bring on epilepsy and convulsions.* Dr. Carpenter, too, in speaking of human hydrophobia, points out how *sensations and ideus* give rise to *motor* phenomena ; for "the sight or sound of fluids, or even the idea of them, occasions, equally with their contact, or with that of a current of air, the most distressing convulsions."† A patient of Majendie at the Hotel Dieu, Paris, is described as having become "absolutely *insane*, so as to require to be restrained."‡ Aitken says that even in the first, or premonitory stage of hydrophobia, the patient is "more excited or depressed than usual."§ In the second, typical, or true hydrophobic, stage, there is a "highly exalted state of every corporeal *sense*,"|| as well as a general "overthrow of the *mind*."¶ But he somewhat confusingly describes the third, or final, stage, as commencing by disturbance of the cerebral functions !** That hydrophobia equally involves the brain and spinal cord, he holds is "evinced by the disorder of *intellectual function and special sense* even early in the disease."†† On the other hand, according to Aitken, the parallel symptoms in the rabies of the dog include morbid appetite, "some singular departures from his ordinary habits," and a marked "readiness to be roused to extreme rage."‡‡ Veterinary authorities themselves have pointed out, moreover, that what is unmistakeably *mental* disturbance accompanies *other* diseases in animals than the specific disease rabies, or precedes them as prodromata ; these other diseases including (*e. g.*) the various forms of distemper ; hydatids in, and tumours of, the brain ; abscess and other lesions of that organ ; as well as gastric engorgement and other disorders or lesions of the digestive organs or functions. Thus veterinarians describe the mental disturbance that accompanies phrenitis in animals as *mania*.

* "Science and Practice of Medicine," p. 675.

† Ibid, p. 682, (quoted by Prof. Aitken).

‡ Quoted by Prof. Aitken in his "Science and Practice of Medicine." (*Op. cit.*, p. 683.)

§ Ibid, p. 677.

|| Ibid, p. 678.

¶ Ibid, p. 677-8.

** Ibid, p. 679.

†† Ibid, p. 680.

‡‡ Ibid, p. 682.

Blaine tells us that in cats and dogs, "when any unusual violence is observed, it is directly attributed to madness" (p. 176); and it is much more correct to do so than he evidently supposes, if we are to understand madness in animals as equivalent to insanity in man, and not as a mere synonym of rabies. What veterinarians are in the habit of speaking of [*e. g.* in the horse] as *craziness*, *crankiness*, *phrensy* or *fury*, *vice* or *viciousness*, is, probably, in the majority of cases, some form of what in man is called *insanity*. The older writers on human insanity, whether medical or legal, in the 17th and 18th centuries made use of similar terms in a similar sense; they described what is now called mania as *phrensy*, *fury*, or *furiosity*, and a quotation has already been given from the author of one of our most recent standard works on "The Science and Practice of Medicine,"* in which he uses, in a single sentence, the terms *rabidity* and *phrensy* as applicable to *man*.

The main object of the present paper is to draw attention—especially of *veterinarians*—to what I believe is an easily proveable fact, that *much, at least, of the so-called madness of the lower animals is strictly equivalent to what is called insanity in man*. I do not propose submitting the grounds on which I confidently base this assertion. I have elsewhere sufficiently shown, I trust, that *other animals have minds of the same character as that of man*;† and I have also fully pointed out that these minds are subject to the same kinds of disturbance or disease as in man.‡ I have already explained that as respects the *physiology of mind*, man and the lower animals occupy essentially the same platform; and I will by-and-by show—or endeavour at least to do so—that, as regards the *pathology of mind*, the same statement is equally true.§ In other words I hope to be able to prove§ that, *both in its normal and abnormal operations, mind is essentially the same in man and other animals*.

It is no part of my present object to say anything specially of *rabies* in animals, or *hydrophobia* in man, save that—

* By Professor Aitken. (*Op. cit.*, p. 672.)

† In a paper on "The *Physiology* of Mind in the Lower Animals:" "Journal of Mental Science," April, 1871.

‡ In a paper on "*Insanity* in the Lower Animals:" "British and Foreign Medico-Chirurgical Review," July, 1871.

§ A paper on the "*Pathology* of Mind in the Lower Animals" as a sequel to that on its *Physiology*, is in preparation for the "Journal of Mental Science."

- (1) I believe both to be comparatively rare.*
- (2) Hydrophobia in man is frequently, if not generally, the result of terror, ignorance, prejudice, or superstition, acting on a morbid *imagination* and a susceptible nervous temperament.
- (3) The majority of cases of so-called *madness* in animals, which are usually attributed to *rabies*, are really of the nature of *insanity*, strictly comparable with that of *man*.
- (4) The majority of the cases of animal madness, which are not assignable to *rabies*, are of the character of *mania*, as it occurs in *man*.

Inasmuch as (a) certain animals possess all the constituent elements of mind; and (b) as they are exposed to many, at least, of the same influences that are productive of functional cerebral disturbance in man,† it would be strange indeed were these other animals exempt from *insanity*, of the character—*mutatis mutandis*—of that which occurs in man. Dr. Maudsley‡ tells us that the elephant, at certain periods of the year, is “veritably mad;” when it becomes dangerous to man from its furious assaults. He does not, however, give his authority or evidence for the statement, though I have no doubt as to its truth. Here the insanity is apparently a form of *acute mania*, of an ephemeral or temporary, as well as periodic, character. The following is an illustrative description of one of the periodic maniacal outbursts so common in that animal:—“An elephant, employed by the government of India in hauling teak logs for the Forest Department, in the Anamallay Forest, lately brought about a suspension of operations for above a fortnight. He began by knocking down his keeper, but luckily did not kill him. He then made for the huts of the keepers, whose wives and families were driven into the jungle. He displayed his skill in pulling down the huts; smashed up the carts and implements; and destroyed a

* Dr. Lindley Kemp has pointed out that animal rabies is epidemic, and that human hydrophobia is very rare during the prevalence of epidemic rabies. Dr. Wilks and other physicians of the London hospitals have also remarked the extreme rarity of cases of either true or spurious hydrophobia in the metropolis. A correspondent of the “Association Medical Journal” (1855, pp. 767 and 840), asserts, on the authority of Dr. Watson, “that but few of those persons bitten by rabid animals become subsequently affected with hydrophobia” (*Vide* paper on “The Distribution of the Mortality from Hydrophobia in England,” by J. N. Radcliffe, “Med. Times,” vol. ii., for 1858, p. 22).

† I have quoted cases of madness in the dog—produced by cold, darkness, and hunger—in my paper on “The Causes of Insanity in Arctic Countries:” “Brit. and Foreign Medico-Chir. Review,” January, 1870, pp. 212, 216, 217.

‡ “Genesis of Mind:” “Journal of Mental Science,” April, 1862, p. 64.

quantity of provisions stored up for his brother elephants. After keeping the settlement in alarm for fifteen days he was shot in one of the legs, and then caught and chained"—a much less barbarous and summary procedure than that adopted with rabid dogs and horses at home! In this case there is no appearance and no suspicion of rabies. We frequently read in Indian newspapers, or quotations therefrom, of elephants being "on the rampage," and in this condition destroying numbers of men, women, and children, as well as horses or other domesticated animals. The term "rampage" applies apparently not to animals that are simply in their wild or natural state, but to a condition of *acute mania*, marked by the development of dangerous destructiveness. The condition, indeed, would appear to be strictly analogous to what, among the Malays, is known as "running-a-muck," when they deal out indiscriminate destruction to every human being coming in their way.

On the other hand, I introduce, by way of contrast in certain respects, what appears to be a similar incident in the case of a horse, in which both diagnosis and treatment were very different.

EXTRAORDINARY CASE OF MADNESS IN A HORSE.—A Huddersfield correspondent writes:—Lately we have been unfortunate enough to have had several cases of madness in this district, but we believe the following is the first authenticated case of madness in a horse:—The animal in question was the property of Mr. Councillor Aston, and was an old favourite. On Saturday week he was first noticed to be unwell, and Mr. Kirk, veterinary surgeon, of this town, was called in to attend the horse. We are informed that on Saturday night the animal showed no symptoms of any disease, only seemed to be in a state of great nervous excitement. Mr. Kirk was called in again early on Monday morning, when he pronounced the horse to be rabid. We understand the horse seized the man who was in attendance on him, and would have worried him had not assistance been quickly rendered to him; as it was, he was very severely bitten. The horse with his teeth tore out the manger and shook it as a dog would shake a rat. He then seems to have broken loose and gone into the next stall (the horse which was usually confined in it had very fortunately been removed), and to have torn out the manger,

* "Athenæum," Decem. 17, 1870, p. 807.

as he had done that in the stall set apart for him. He then seems to have knocked down the partition dividing the stalls, and rushed about the stable, worrying everything he came across, until he had made the stable into a perfect wreck. The horse was observed to occasionally paw with his fore feet, and worry his fore leg something like a dog gnawing at a bone. Mr. Astin, veterinary surgeon, was afterwards called in, when he at once confirmed Mr. Kirk's opinion, and the horse was accordingly shot.—[Quoted from the "Leeds Mercury" by the Edinburgh "Daily Review," Novem. 25, 1870.]

Of the popular accounts given so frequently in the public prints of instances of madness in the dog, there are very few indeed in which there are any decided indications of the existence of *rabies*. "All dogs that are *mad* are *not mad from hydrophobia*," says the Honble. Grantley Berkeley, writing on hydrophobia (in the "Globe," in January, 1871), giving the results of a long and intimate experience of the habits and diseases of the dog. He has had (he says) many hundreds of dogs *mad* in his own kennels. The insanity, however, was attributed to "distemper," and was "attended with no hydrophobic symptoms whatever. Such dogs would bite, but their bite was not dangerous; many of these mad dogs recovered; many more were seized with fits and died. But in no case did harm arise to man from their bite." *Only one case of genuine hydrophobia* occurred in this kennel. He speaks quite properly of the "*insanity* of hydrophobia," and describes its prodromata as including dulness of spirits, loss of natural vivacity, and playfulness—in the puppy, refusing to play as usual with his fellows. He describes the "intermittent symptoms of *insanity*" in this single case of genuine hydrophobia. "The noise of water being splashed about him, or a little cast upon his face, threw him into rabid convulsions." He considers the symptom of "unconquerable hatred to and dread of water" "the fact as to whether a dog will or will not touch water" as "the one solitary but never-failing" distinctive mark by which to separate *insanity*—at times curable and not transferable to man—from true hydrophobia.

As regards hydrophobia in man, Dr. Tuke* has shown that many cases, at least, are the *result of mere emotion or imagina-*

* "Illustrations of the Influence of the Mind upon the Body in Health and Disease, with especial reference to the *Imagination*:" "Journal of Mental Science," January, 1871, pp. 539, 540.

tion; they are due simply to mental anxiety, grief, or terror, associated with or acting upon a morbid fancy. For, on the one hand, *fatal* cases have occurred in man *without the bite of an animal at all*; the mere *belief* that a bite has been received from a rabid animal has sufficed to induce violent hydrophobia. While, on the other hand, the bites of dogs reputedly rabid or mad have been frequently followed by no symptoms whatever. Chomel and Trousseau* hold that certain cases of hydrophobia—terminating in recovery, or occurring after a given interval from the period of the bite—are spurious disorders *due merely to fear and imagination!*

According to Professor Aitken, the human hydrophobic patient “for a time . . . usually suffers no other derangement of health than the depression of spirits which his *apprehensions* are calculated to excite!”† He admits that undoubted inoculation with the rabietic virus is not always followed by the development of the specific disease hydrophobia in man;‡ and he confesses that “there are many reported cases in which the *imagination* of a patient bitten by a dog has been so powerful as to induce symptoms *resembling* the disease”§—hydrophobia.|| He asserts, moreover, that “no instance is known of any person being affected with hydrophobia unless antecedently bitten by a rabid animal capable of communicating the disease.”¶ In order to the reconciliation of the extremely discrepant opinions of veterinary and medical writers, it is necessary to recognize the

* In the “Gazette des Hôpitaux,” for 1861 (p. 45), the report of a clinical lecture on hydrophobia, by Trousseau, is given, in which he mentions having met with a number of cases “*simulating* this disease, but really arising from *mental impressions*.” (Quoted in the “Year Book of the New Sydenham Society,” for 1862, p. 221. *Vide* also “Med. Times,” vol. ii., for 1861, p. 172, which refers to cases “in persons, who had been *alarmed, supposing* themselves to have been bit by rabid animals.”) Dr. Scriven also reports a case, “which, although not referable to a bite of a dog, closely *resembled* hydrophobia, and was saved from death by prompt laryngotomy with a penknife.” (“Year Book,” for 1859, p. 441.)

† “Science and Practice of Medicine:” *op. cit.*, p. 677.

‡ *Ibid.*, p. 672.

§ *Ibid.*, p. 682.

|| The celebrated Cullen ranked hydrophobia with hysteria, and divided it into two varieties, “one caused by the bite of a rabid animal, and characterised by the desire to bite; the other not having this tendency to bite and (probably) *not* produced by the bite of a rabid animal. Several instances of hydrophobia of the latter kind have been recorded by Dr. Innes, a Professor of Medicine in the University of Edinburgh, in 1732; and by Pinel, Sarriotte, and other writers.” (“Association Medical Journal,” 1855, p. 514.) An admirable review of the whole subject of animal rabies and human hydrophobia, by Dr. Lindley Kemp, is to be found in the “Edinburgh Medical and Surgical Journal,” for Jan., 1855, or in abstract in the “Association Med. Journal,” just quoted.

¶ “Science and Practice of Medicine:” *op. cit.*, p. 681.

existence of *two* forms of rabies in animals, and of hydrophobia in man; the one distinguished from the other only by the saliva containing a specific virus, capable, when inoculated in certain other animals, of reproducing the original disease, the communicated disease possessing a similarly poisonous oral secretion.* But it must be obvious that, practically, it will seldom be possible to *prove* or demonstrate the existence of the specific virus in the saliva; for even in cases in which crucial inoculation-experiment is attempted—as has been already seen there must be cases, both in other animals and man, that are *insusceptible* of the action of rabietic or hydrophobic saliva. And, in short, the distinction between true and spurious rabies and hydrophobia, will *practically* remain just what it is at present.

Many of the recorded cases of animal rabies and human hydrophobia are of the most anomalous and worthless character. Thus the "Year Book of the New Sydenham Society," for 1862 (p. 77), tells us that Dr. Porter "records a case which *he regards* as one of hydrophobia, the patient dying in asthenia, after having shown some *very suspicious* symptoms. He had been bitten four days previously by a dog, which, however, had *shown no sign of rabies!*" As regards the diagnosis of rabies, we are told by an American physician:—"The voice of the rabid dog is peculiarly altered; and this may be *the sole* and earliest symptom of the disease!"† Death occurred—from hydrophobia—in a soldier some time "after he was bitten by a dog which had appeared sickly, and had foamed at the mouth."‡ In the "Lancet" (Oct. 31, 1868, p. 590), a case is given of fatal hydrophobia following the bite of a *healthy* dog, in which it was suggested "that *anger* may give a deadly property to the saliva of the dog!" The same journal (July 27, 1867, p. 103) notices a French case, in

* "Dr. Lindley Kemp appears of opinion that the symptoms, which occasionally come on some time after the bite of a rabid animal, are in some way analogous to traumatic tetanus; yet that there is a difference, the disease being modified by the impression made on the patient's *mind* by the nature of the accident, and by his having in the interval anxiously read books about hydrophobia, consulted with his friends about it, and brooded over his reflections until his *mental powers have become decidedly affected*. Dr. Kemp would rather classify hydrophobia with *hysteria, catalepsy*, and diseases of that class which occur in those only who possess *mobility* of the nervous centres. In proof of the alliance of hydrophobia with these diseases in which *moral* causes act, Dr. Kemp relates the case of a gentleman who was cured of hydrophobic symptoms by being persuaded that the dog which had bitten him was certainly not rabid." ("Assoc. Med. Jour.," 1855, p. 515.)

† "Year Book of the New Sydenham Society," for 1861, p. 232.

‡ "Year Book of the New Sydenham Society," for 1859, p. 185.

which "it is remarkable that the patient *had not been bitten*. A dog, *subsequently* found in a rabid state and destroyed, had *scratched* him on the cheek." M. Selle, at the Turin Academy of Medicine, in 1866, "gave an account of an old woman, who was attacked and severely bitten by a female badger, *infuriated by the loss of its young*. She . . . died at the end of a month, having manifested during several days, the symptoms of well marked hydrophobia."* Here again there is no evidence of *rabies* in the badger, which was either simply in a state of *passion* or of *mania*.

In the "Medical Times" (vol. ii., for 1866, p. 499), is reported a rapidly fatal, well-marked case of hydrophobia, "judging from the clinical symptoms;" but in which there was—as so frequently happens in such cases—"no good evidence—indeed, we believe no evidence at all—as to the *dog's condition*, and unfortunately the animal was killed soon after it had bitten the man. It is a popular prejudice that to kill a mad dog" (or one reputedly so, or indeed any other dog), "which *has bitten any one*, renders the person bitten less liable to become rabid," a prejudice that leads to the wholesale unnecessary slaughter of numerous healthy dogs, and a practice which renders it impossible, in many cases, to *prove the existence of rabies* in the suspected animal! In another case, reported in the same journal (vol. ii., for 1865, p. 333), we are told, the patient, "about six weeks previously, had burnt his face and both arms slightly with hot iron. Afterwards a little pet dog, *with which he was in the habit of playing*, had often licked his face and hands, *as he had been used to do before*. Later this dog had begun to snap at people generally, and had on that account been drowned." A dog may be snappish without being rabietic; and, indeed, there is no proper evidence in this case of the existence of true *rabies*. In America, "Dr. Massey commenced early in 1853 to treat wounds made by rabid animals with tincture of iodine He has employed this treatment with success in a number of cases. *Some of the animals, he has reason to believe, were rabid; and others perhaps not so!*"†

Dr. Henrich, of Mayence, relates a "case of *spontaneous hydrophobia*"—occurring, that is, *without the bite of an animal at all*. The only facts that he could gather of the previous history merely showed that the man had been somewhat given

* "Gazette Médicale," April 7, 1866; quoted in "Medical Times," vol. i., for 1866, p. 403.

† "Medical Times," vol. i., for 1858, p. 434.

to venereal excesses, and that of late he had felt his strength enfeebled and his *mind* somewhat tormented by compunction.* Regarding a remarkable fatal case of so-called hydrophobia, that occurred in London in 1861, which, however, was really a case of "*delirium tremens*, brought on by fright in a patient of highly nervous temperament," a medical journalist thus comments:—"The fate of the landlord of the Red Cow Tavern, Park-place, Mile-end-road, tragic as it is, has its *ludicrous* aspects when considered as an evidence of *popular misapprehension*. A gentleman entered his house on the 17th ult., with a large mastiff, which the landlord was admiring and patting on the head, when it suddenly snapped at him and bit him on the inner side of the left arm. Not long after, the poor man is said to have become very violent, and shown a dislike of water. He barked like a dog several times, and imitated the crowing of a cock. He spoke in a very incoherent manner: said that his room was wet, and infested with various kinds of fish. He seemed to be much better when informed that the dog had been killed! Nevertheless excitement soon came back with greater violence, in-somuch that it was necessary to have three or four persons to hold him down. Therefore a keeper and straight-waistcoat were sent for, but the man died before it could be put on. Dr. Edmunds, . . . one of the witnesses, commented upon the foolish notion that when any one had been bitten, he would become more secure by destroying the dog; and showed that, if the dog could have been preserved alive and in health, all fear might have been dissipated! The popular notion is, however, firmly rooted—that if an animal who bites a man ever becomes mad *afterwards*, the man bitten will do so too! This proposition may agree with some old discarded doctrines about *Sympathy*, but not with modern *Physiology*!"† In various respects, this case with its commentary is one of the most suggestive and important that I have met with in the course of my reading on the subject of spurious hydrophobia, illustrating, as it does *inter alia*, the following facts:—

1. The non-rabidity of many biting dogs.
2. The sacrifice of many non-rabid dogs in deference to a public opinion.
3. The effect of a *purely mental cause*—of fear and imagina-

* "Henke's Zeitschrift," Band. lvii., pp. 361-382. Quoted in "Med. Times," vol. i., for 1859, p. 584.

† "Med. Times," vol. ii., for 1861, p. 10.

tion—in the production of a rapidly fatal pseudo-specific disease.

4. The resemblances and differences between spurious and real hydrophobia.

5. The frequent occurrence of indisputable *mental aberration*, marked by the occurrence of *delusions* and of the most violent *mania*, both in the spurious and real disease.

6. The mischievous results of popular delusions, and the necessity that exists for popular education in the general laws of health and disease.

7. The occurrence of *supposed typical symptoms** of hydrophobia—(aversion to water, and imitation of a dog's bark)—in the *spurious* disease, and their frequent absence in that which is real or specific.

One of the results of a discussion that took place on the subject of Hydrophobia at the French Academy of Sciences in January, 1863, is the assertion that, "there are instances in which there could be no apparent cause—no tracing of communication from a diseased animal. That *Hysteria*, in an aggravated form, has *assumed the appearance* of the disease, medical records fully establish."† Later in the same year, animal rabies became the theme at the French Academy of Medicine, of a much more prolonged debate, in which the principal parts were taken by M. Bouley, the well-known Inspector-General of Veterinary Schools in France, Professor Tardieu, and M. Gosselin.‡ At a meeting of the Medical Society of Liverpool, in Feb. 1864, Dr. Whittle gave the following particulars, *inter alia*, of a fatal case of hydrophobia:—"At first (the patient) could not remember that he had ever been bitten; but during the day it came to his remembrance that, about two months previously, he was working at a gentleman's house, and had occasion to go to the water-closet, and that before he had re-adjusted his clothes, a little lap-dog, which had been lying on a heap of shavings in the corner, flew at him. The animal did not actually bite him, but, with one of his fangs, inflicted a slight *scratch* on the end of the penis. The injury was so trifling that he took no notice of it. The scratch

* In an admirable summary of the chief features of *Rabies canina*, given in a Memoir presented by M. Boudin to the French Academy of Medicine, in 1861, he asserts that "*No true pathognomonic sign of rabies exists in the dog.*" [Union Médicale: quoted in abstract in "Medical Times," vol. ii., for 1861, p. 563.]

† "Med. Times," vol. i., for 1863, p. 225.

‡ Ibid., vol. ii., for 1863, pp. 465, 493, and 542.

healed at once, and the whole matter had passed from his memory. One of his fellow-workmen took upon himself to drown the dog, *so that no information could be procured as to its condition!* The remembrance of this circumstance appeared to have a most injurious effect upon the patient. He felt himself doomed; went to bed; took leave of his children He was tormented with the *fear* that he might bite some one, but he never made the slightest attempt to do so.”* M. Decraix, a Veterinary Surgeon, at the French Academy of Medicine, in Feby., 1864, mentioned an experiment made by himself, “as an example of how the *imagination* and pre-occupations may exert an influence in developing symptoms *resembling hydrophobia.*” In order to show the impunity with which the flesh of rabid dogs might be eaten either by man or other animals, he himself swallowed morsels both of the raw and roasted flesh of dogs that had just died of rabies. Convinced himself of its innocuousness, he felt no bad results, “until, some days after, he read an account of some cases, in which the disease had been transmitted by eating the flesh of animals who had suffered from it. He *then* became somewhat *alarmed*, and *immediately* perceived a feeling of constriction of the throat, and a notable change in the voice. Under the influence of distractions and constant occupations, these sensations disappeared, but they showed themselves again whenever he was inactive, or when his *thoughts* reverted to his experiments.”†

It must be obvious, then, that the development of *hydrophobia in man is no proof whatever of the existence of rabies in a dog*, or other animal,‡ that may have bitten the patient. And yet, practically, every dog that viciously bites a man is regarded as *rabietic*, and is at once ruthlessly sacrificed to man’s ignorance and inhumanity. Very literally and truly it may be said in the present connexion, “Give a dog a bad name, and you may as well hang him;” for the bad name referred to is the evil reputation of being rabid, while hanging is no less summary a disposal of the unfortunate animal than is the more common practice of shooting! But in probably nine cases out of ten, the evil name is as undeserved as the

* “Med. Times,” vol. i. for 1864, p. 349.

† “Med. Times,” vol. i. for 1864, p. 179.

‡ Rabies is not confined to the dog; it occurs also in the fox, wolf, jackal, and cat, and is communicable to probably all warm-blooded animals, certainly to all domesticated animals, such as the horse, elephant, sheep, ox, and even the common fowl [Aitken: “Science and Practice of Medicine,” p. 679.]

treatment is cruel, unbecoming, and unnecessary. It is an utterly vicious assumption that every furious dog that bites is *rabid*, and that the morbid mental, motor, or sensory phenomena developed in the person bitten are necessarily *hydrophobic*! The late well-known veterinarian, Prof. Dick, of Edinburgh, went so far as to declare that hydrophobia had no real existence at all,* an assertion infinitely nearer the truth—more merciful, and at the same time, more scientific—than the current popular belief.

Dr. Blandford† tells us that, “in many animals the . . . period of ‘the rut’ (which is analogous to human menstruation) produces mental phenomena, which approach *insanity* as nearly as anything evinced by these lower animals can. The madness of ‘March hares’ has passed into a proverb. The stag and buck in October render unsafe the parks in which they dwell.” This is probably merely a sexual furor—a sort of acute, temporary, periodic *mania*, comparable with the erotomania (nymphomania and satyriasis) of man, rather than simply an *approach* to insanity. There is a similar destructive furor—marked sometimes by what Prof. Laycock calls the *killing instinct*—in the puerperal state of many animals. Thus an instance of a “child killed by a sow” in Glen Urquhart, Inverness-shire, was recently reported in a local newspaper.‡ “The sow *had lately littered*,” we are told; having access to a child of 18 months old, it furiously attacked the infant, “inflicting such injuries on the head and face as to cause its death in a few hours.” Obviously, the furor of this sow was the exact equivalent of what in the human subject would be designated *puerperal homicidal mania*.

The fishermen on the Volga, according to the testimony of Lord Royston, regard some fish, resembling chad, as *insane*, because they swim impetuously round and round in a circle, and they have the further belief that men eating the said fish at such times, also become insane! There may be much more truth in this tradition or belief

* “The salivary secretion also, both in dogs and man, is by most *now* regarded as *innocuous*. Prof. Dick, of Edinburgh, has come to the conclusion that the saliva of a rabid dog has *no* power of inducing disease when introduced into the system of another *dog*” “If the saliva be unchanged, and innocuous, there is an end” [says Dr. Lindley Kemp] “to the belief that the bite of a rabid dog *can* produce hydrophobia or *any specific disease*.”—[Assoc. Med. Journ., 1855, p. 514.]

† “Insanity and its treatment,” 1871, p. 54.

‡ “Inverness Advertiser,” April, 1871.

than at first sight appears, for various poisons produce on various animals a kind of delirium, accompanied by eccentric or rotatory movements of a similar kind,* and the flesh of various animals in certain conditions [*e.g.*, after feeding on shrubs noxious to man, though not to themselves] becomes poisonous to man, producing mental, motor, and sensory derangement.† Quite recently a roast *goose* was the subject of criminal indictment for having nearly poisoned a whole family. Lieut. Meade, in his work on New Zealand and the South Sea Islands (1870, p. 185), mentions a very poisonous *fish*,‡ in Tutuila, one of the Samoan Islands.

Conolly, in his "Treatment of the Insane without Mechanical Restraint" (1856, p. 33), says that in man "exhibitions of madness *were* witnessed, which are no longer to be found, because they were *not the simple product of malady*, but of malady aggravated by mismanagement." The same may be even more emphatically said of *animal* madness. The typical, or common form of its expression—the frequency of furiosity—of violent, destructive, dangerous mania, are in all probability, due to *man's cruelty*; and if this be true, the type of animal insanity will change, as that of man has done, in proportion as *humane* becomes substituted for an inhumane treatment. At present animals are persecuted, ill-used—often literally *goaded into fury*: and *mania* is, therefore, the commonest form of insanity in animals, the next most frequent variety being *suicidal melancholia*. But, when the *law of kindness* dictates man's treatment of other animals—as it now regulates the management of his insane fellow man—destructive violence at least, and perhaps also desponding suicidal propensity, will doubtless become much less frequent.

If, as I have elsewhere shown, or will show, animals *feel* as keenly as we do, both in a mental and bodily sense: if they

* *Vide* my Papers on "The Toot plant and poison of New Zealand:" "Brit. and Foreign Medico-Chir. Review," July, 1865, pp. 154, 166, and October, 1868, p. 471.

† *Ibid.*, pp. 171 and 471.

‡ An article on *Poisonous Fish* in "All the Year Round," (No. 120, March, 1871,) gives a number of illustrative instances. Dr. Baird, in his "Cyclopædia of the Natural Sciences" (1861), states that *Tetragonurus Cuvierii*, a Mediterranean fish, "often produces violent poisonous effects" when cooked and eaten, "and it is asserted that this peculiar property is given to it by its food, which consists of *Acalephæ*, known to be acrid and caustic." The same author also mentions that the West Indian *Barracuda* [belonging to the genus *Sphyræna*, which forms the type of the family *Sphyrænidæ*] has a flesh that in general is good, but at certain seasons it becomes highly poisonous." Dr. Burt, in the "Edinr. Medical Journal," for 1856 (p. 1014), gives a case of poisoning from eating American partridge [*Bonasia Umbellus*, properly the Ruffed grouse of America].

think and act in the same way under similar circumstances: if they are subject to the same *diseases* that affect man, and to the same influences that in him give rise to insanity: if medication in other diseases in other animals is conducted on the same general principles as in man, the same drugs frequently producing, under similar circumstances, similar effects: and if the lower animals are equally subject with man to the operation not only of purely physical, but also of purely *mental or moral*, as well as of mixed, influences, there can be no reason why the *treatment* of insanity in other animals is not conducted on the principles which regulate that of human insanity, adapting the details, of course, to the peculiarities of their organisation and habits. If this be the case, the present mode of disposing (*e.g.*) of mad dogs must appear singularly unjust, unnecessary, tyrannical, and cruel. I believe that the first and most important practical lesson, which veterinarians may and should teach themselves by a study of the mental phenomena of disease in the lower animals, is to treat them on the same humane principles as those which now characterise the management of the human insane. The veterinarian's views of treatment cannot fail to become revolutionised whenever he clearly perceives and admits that only a few cases of animal madness are really referable to *rabies*, while the majority are of the same nature as the *insanity* of man, producible by similar causes—removeable, in recent cases, by similar means.

For many weighty reasons, it seems to me most desirable that veterinarians should give their attention to the study of the *mental* phenomena of animals in a state of disease, and more especially of those forms of animal madness, which are not associated with rabies, or other diseases originating in—and sometimes regarded as specific to—the lower animals. We want a series of well-observed and well-recorded cases, illustrating the various forms of *insanity in animals*—"madness" of a kind, that is, strictly comparable with the insanity of man. The veterinarian will have no difficulty in detecting *insanity of action* in the lower animals (*e.g.*, in the dog, horse, ox, and elephant). Insane *acts* in animals may be confined in their effects, as in man, to the individual, *e.g.*, self-starvation or suicide; or they may be extended to other individuals, genera or species, *e.g.*, the furious, dangerous, or murderous assaults so common in animal mania. These acts include a whole series of peculiarities of conduct—peculiarities in so far as they are marked and sudden changes from the behaviour

or habits natural to the individual in health ; which changes are, by veterinarians, admitted to rank as *eccentricities*, but which in man would be held as either amounting (in the aggregate, taken in connexion with each other, and with certain other phenomena) to insanity, or as constituting its prodromata. The veterinarian will have much more difficulty in detecting *insanity of thought* or idea—what is called in man monomania, *delusional or intellectual insanity*. He has not that assistance in his investigation, which is furnished by *speech and writing* in man. Insane *ideas* may have to be inferred from insane *acts* ; but there may be really no greater difficulty in establishing or inferring the presence of delusion, of intellectual or ideational aberration, than there is in proving the existence in animals of such faculties as thought, imagination, abstraction, reflection. I must not, however, in the present paper permit myself to enter further on the puzzling, but most interesting, subject of mind in animals, whether in health or disease ; but must content myself and the reader by referring him to the papers which I have already published, or am about to publish thereanent. I meanwhile take leave of the subject with the expression of an opinion that it has hitherto been only too common an error—albeit a most serious one in its bearing equally on man and other animals—to draw a broad line of demarcation between them in all respects. Only a few years ago—as I have elsewhere pointed out—it was generally supposed, even by the highest medical and scientific authorities in this country, that the diseases of man and other animals were essentially or quite different.* Now, thanks more especially to the general attention that was directed to the diseases of the lower animals by the Cattle Plague of 1865-6, it is established not only that man and other animals are subject to many at least of the same diseases,† but that various contagious diseases of

* (1) "On the Transmission of Disease between Man and the Lower Animals:" Edinr. Veterinary Review, July, 1858.

(2) "On Choleraization in Animals:" Lancet, Decem. 1, 1866.

(3) "How to deal with the Cattle Plague," Perthshire Advertiser, Jany. 25, 1866.

† Claude Bernard asserts (in his "Lectures on Experimental Pathology:" Medical Times, Jany. 21, 1860, p. 56) that "each particular *species* of animal has its own peculiar diseases, which cannot be transmitted to a neighbouring species, however closely allied." This assertion requires confirmation or explanation, and as such is worthy the attention of veterinarians. Its correctness is directly challenged by certain facts or assertions, about to be narrated, concerning the transmission of the same disease between *many* different genera and species of animals, including man !

both are inter-communicable—in other words, are transmissible from other animals to man, and *vice versa*. Thus, in addition to the diseases which I have already described* as transmissible between man and other animals, or *vice versa*, I may mention the following:—

(1.) *Monkeys* are liable, like man, to catarrh, phthisis, apoplexy, enteritis, and fever;† while they can also contract syphilis, according to M. Turenne, of Paris.‡ At the meeting of the British Association in Dublin, in 1857, I heard Professor Faye, of Christiania, state that man's syphilis can be communicated to the lower animals. On them, when syphilised, can also be practised the curative chancre-inoculation, generally known as syphilisation,§ which, however, he holds, cannot give perfect immunity from syphilis. ¶

(2.) "*Tubercle, cancer, and many other morbid products, are found equally in animals and man.*"||

(3.) At the meeting of the Pathological Society of London, on May 1st, 1860, Dr. Crisp showed several specimens of *pericarditis in birds*, stating that the disease is very common in these animals.¶

(4.) Dr. Draper Mc Kinder, of Gainsborough, noticed the coincidence in 1857-8 of throat disease affecting *horses*, while *diphtheria* prevailed among mankind. In horses this throat disease, though generally amenable to treatment, in some cases proved fatal by supervenient pleurisy. The successful treatment in horses, as in man, was stimulant.**

(5.) At a discussion following the reading of a paper by Professor Burdon Sanderson, on *diphtheria*, in 1859, Dr. Camps said that the lower animals had suffered from a similar affection. "At Boulogne, it was alleged that the disease was first caused by eating the flesh of a pig, which had had the throat disorder; and it had also been stated that the pig had fed upon the flesh of a glandered horse."††

(6.) M. Delafond stated at the Academy of Medicine of

* In the Papers quoted in Foot Note *, p. 197.

† According to Darwin's "Descent of Man," 1871.

‡ *Vide* his "Experiments on Syphilisation."

§ *Vide* author's paper on "Syphilisation in Norway." "Edinburgh Medical Journal," November, 1857.

|| Claude Bernard's "Lectures on Experimental Pathology." "Medical Times," Jan. 21 1860, p. 56.

¶ "Lancet," May 19, 1860, p. 496.

** "On Epidemic Throat Affection, or Diphtheria, as it appeared at Gainsborough in 1857-8," read before the Epidemiological Society, on Dec. 6, 1858.

"Medical Times," Jan. 8, 1859, p. 44.

†† "Lancet," May 28, 1859.

Paris, in 1859, that the brute creation do not seem less liable to *croup* and *diphtheria* than the human species. Some years before, M. Trousseau had lost 200 fowls from diphtheria, besides a number of oxen and horses. In all these animals tracheotomy was performed with this result, that, where it was had early recourse to, the proportion of the recoveries was 75-80 per cent., while when resorted to *in extremis* the percentage was only 67-68.*

(7.) A letter from the French correspondent of the "Glasgow Herald" of March 10, 1860, referring to the cold and changeable spring weather of that year, says, "A curious epidemic has also sprung up among the gallinaceous tribe in some quarters. In the Var, for instance, nearly all the cocks and hens are dying of *croup*, and even ducks and other feathered bipeds are suffering horribly."

(8.) Major C. O. Creagh, of the 86th Regiment, writing from the Army and Navy Club to "Notes and Queries" [quoted in the "North British Daily Mail" of January 12, 1861], says, in reference to an unusually severe epidemic of *cholera* at Kurrachee, Scinde, in 1846, in which the 86th Regiment lost in ten days 240 men, "It was particularly remarked that vultures, kites, and other *birds* of prey, which are very numerous in that part of the world, entirely disappeared almost simultaneously with the outbreak of cholera, returning gradually after the first few days, when the virulence of the disease began to abate. . . . It would seem that the inhabitants of the sea are by no means exempt from the visitation of this mysterious disease. On the second and third day after the appearance of the cholera, the bay to the south of Kurrachee was strewed with countless myriads of dead *fish*, which were left on the beach by the receding tide. At high water the shores of the bay presented a most singular appearance; the waves for several yards from the shore seeming to be composed of an almost solid mass of dead fish, chiefly of the sardine species, amongst which, however, there were not wanting others of a considerably larger size."

(9.) The Rev. Dr. Lang, of Sydney, in his Account of New South Wales,† speaking of the County of Cumberland, which contains Sydney as its capital city, remarks—"Within the last few years" [prior, that is, to 1852] . . . "it has been found that both cattle and sheep depasturing in certain localities in the county of Cumberland have been subject to a disease some-

* Chaillon's "Journal of Practical Medicine and Surgery," Feb. 1859, p. 85.

† Vol. ii., p. 325, 1852, 3rd Edition.

what resembling the *cholera* in man, equally mysterious in its origin, equally rapid in its progress, and equally fatal in its termination. And there have been even several instances of unfortunate individuals, who have died from having either *inhaled the noxious gases* disengaged from the carcasses of animals that have died of this disease, or wounded themselves with the flaying knife when skinning them. Attempts have been made by authority to ascertain the cause and origin of this disease, but they have not as yet been successful. Stringent municipal regulations have been passed, however, for the immediate destruction of the carcasses of all animals dying of the disease."

(10.) In the Quarterly Return for June, 1862, of the Registrar of Deaths, &c., for Scotland, he speaks of the "suspicion that sore throat and diphtheria in the human subject is but a variety of that epidemic disease known in cattle by the name of murrain, or *epizootic aphtha*, characterised in them by the aphthous and ulcerated mouth and sore hoofs. A few cases have been brought under our notice by an intelligent veterinary surgeon, in which it was clearly established that the milk of cows affected with murrain caused aphthous mouths and *diphtheria* in children, and fatal *aphthæ*, terminating in ulcerous affections of the mouth, throat, and windpipe in the case of pigs."

(11.) The well-known epidemiologist, J. N. Radcliffe, now one of Her Majesty's Inspectors of Public Health under the Privy Council, in his "Report on Epidemic, Epizootic, and Epiphytic Disease in Great Britain in 1861-2,"* remarks—"There are some grounds for the belief that the milk of cows suffering from *vesicular murrain*, which has of late been so prevalent among cattle, may communicate the disease to human beings. The Registrar-General of Scotland believes that an aphthous affection, which has been recently prevalent widely among certain districts . . . is entirely due to this cause."

(12.) Principal McCall, of the Glasgow Veterinary College, in 1862,† described *Eczema epizootica* (=murrain) as common in almost every byre, rendering the consumption of the milk of affected animals dangerous to human life, and the probable

* Presented to the meeting of the Epidemiological Society on December 1, 1862.

† "The diseases transmissible from the ox, sheep, and pig, to man, and which render the consumption of their flesh and milk injurious, if not poisonous."—Inaugural Address for 1862-3, delivered on November 5, 1862.

cause of a considerable proportion of infantile mortality. The milk of murrainous cattle had produced *malignant sore throat*, and death in calves and pigs to which it had been given experimentally.

(13.) Principal Gamgee, of the Edinburgh Veterinary College, also in 1862,* published a case of "*epizootic aphthæ* and disease communicated by the milk of affected cows," occurring on a farm near Kelso. "The litter from the milk-cows was thrown out amongst the . . . cattle and pigs, and the latter received also large quantities of the diseased milk." Both classes of animals were attacked. "While the disease was at its height, several of the farm servants' children, who had partaken of the milk, suffered from derangement of the alimentary canal, with sickness, pain in the bowels, diarrhœa, &c. . . . On discontinuing the milk, the disorder ceased." Deaths in calves and pigs fed on such milk, and eruptions on the hands of human beings, Gamgee apparently considers "conclusive as to the danger to man from contamination by the specific virus of epizootic aphthæ." He suggests that the eruptions so common about the mouth, face, and body of infants reared on cows' milk may be due to epizootic aphthæ. There is evidence that the warm, newly-drawn milk can communicate the specific disease to the human subject who drinks it.

(14.) Two cases of "Murrain [*aphtha epizootica*] in Man" are given by Drs. Hislop and Geo. W. Balfour in the "Edinburgh Medical Journal" for February, 1863.

(15.) *Small-pox* occurs in camels, sheep, and cows, in India and Persia, according to Dr. Winchester.† In the province of Lus, along the sea coast, south-west of Karachi (=Kur-rachee?), the milkers of camels have a disease called "photo-shootur" [that is "photo"=small-pox, and "shootur"=of the camel]. The original disease occurs on the animal's udder, as in the cow. The disease communicated to the milkers is similar to the cow-pox in man; it occurs on the hands and arms, not extending above the elbows. It is never fatal. Those who have had this transmitted disease are exempt from small-pox. In regard to the neighbourhood of Bushire, Persia, a Mr. Bruce wrote, of date March 26, 1813,‡ "communicating the discovery of a disease in Persia con-

* "Edinburgh Veterinary Review," August, 1862.

† Transactions of the Medical and Physical Society of Bombay: Appendix: quoted in "Scotsman," October 4, 1862.

‡ Appendix D. Vol. i., "Transactions of the Literary Society of Bombay," 1819.

tracted by such as milk the cattle and sheep, and which is a preventive of the small-pox." Both the original disease and the fact of the transmitted disease exempting from small-pox were well known to the Eliaats, or wandering tribes of Persia. The original disease was prevalent among cows—on the teats. It was, however, more so among sheep, from which animal the disease was oftener contracted by man, because most of the butter, ghee, and cheese in use were made from sheep's milk, the black cattle yielding little, and being used chiefly for draught.

(16.) In 1862, small-pox broke out in *sheep* in different parts of England, beginning with the flock of Joseph Parry, at Allington, in Wiltshire—the subject giving rise at the time to prominent public controversy.* It was "eminently contagious," and very fatal. The treatment was inoculation, just as in the human subject; the "matter" used, however, being that of the *variola ovina*, the process of inoculation with this matter being long known to, or called by, French and Italian writers *ovination* or *clavelisation*. The disease had previously appeared in this country in 1847, "when some merinos from Spain brought it to Smithfield." Some medical writers hold that *variola ovina* is "not identical with *variola humana*, or with *vaccinia*; or it is markedly modified by the "constitution of the species it affects." Some regard it as essentially different from human *variola*, and more nearly allied to *vaccinia*. It is the "clavelée" of the French—frequently epizootic in the flocks of France and Italy, but unknown in England till 1847.

(17.) Cases have been cited of apparent *variola in monkeys* as proof that *human variola* is communicable to other animals most nearly approaching man in structure and habits. A gentleman travelling in the province of Veragua, New Grenada, in 1841, writing to Dr. Anderson of Glasgow,† narrates that near the town of David, in Chiriqui, about 60 or 70 miles to the north-east of St. Jago, great numbers of dead and dying monkeys were encountered in the forest. "After careful examination, no doubt remained on my mind" (says he) "that they were suffering, and had died, from *small-pox*. They presented every evidence of the disease. The pustules were perfectly formed, and in one instance . . . the animal was nearly quite blind from the effects."

* (1) "Daily Telegraph," August 11, 1862; leading article and paragraph.

(2) "Medical Times," August 16, 1862, p. 158: leading article.

† An extract from which letter was published in Dr. Anderson's "Lectures introductory to the Study of Fever," in 1862, p. 70.

(18.) In 1862, Dr. William Budd, of Bristol,* recorded a series of nine cases in man, of *malignant pustule*—all of them fatal from the fourth to the eighth day. The disease is common in France and Germany, but is comparatively rare in England. It is identical with the fatal and very contagious disease called in *oxen* “charbon,” and in *sheep* “sang,” on the continent; which is equally common and fatal in England, in both oxen and sheep, as “joint murrain,” “black quarter,” or “quarter evil.” It is communicable to man, (1) by direct inoculation; (2) by eating the flesh of animals killed while diseased; (3) by the bites of insects conveying the poison. It is also *re-communicable* from man to animals.

(19.) In 1852 a series of cases of *malignant pustule* was admitted into St. Bartholomew’s Hospital, London,† most of which were rapidly fatal. In these cases there was seldom any history of inoculation or contagion from the lower animals; though it is possible that the poison may have been conveyed by flies or other insects passing between diseased animals and man.

(20.) There is a review of a work or paper “On *Malignant Pustule*, as communicated to Man from the Lower Animals,” by Dr. Bourgeois, of Paris, in the “British and Foreign Medico-Chirurgical Review,” Jan., 1863, p. 176.

(21.) Principal M’Call‡ speaks of the disease in cattle, the *materies morbi* of which gives rise to *malignant pustule* in man, as “black leg,” which he describes as a malignant form of *anthrax*—equivalent to the “charbon” of the French and “milzbrand” of the Germans. If any of the diseased fluids of the affected animals comes in contact with an abraded portion of the skin in man; or, if flies alight on the face or hands of man after having rested on the carcase of diseased animals, malignant pustule in the man is the result—the transmitted disease (in man) being, like the original one (in cattle), invariably fatal.

(22.) M. Renault, Professor in and Director of the celebrated Veterinary School at Alfort, France, died by contagion from *Peripneumonia* among cattle in the Pontine Marshes, near Rome, whither he had been sent by his Government to investigate the disease.§

* “Medical Times,” August 16, 1862, p. 163.

† A report was made upon them by the late Harry Ludlow, the then house surgeon, in the “Medical Times” for September 18, 1852. They are quoted in the “Medical Times” for August 23, 1862, p. 195.

‡ Inaugural Address, 1862 (*op. cit.*)

§ “Medical Times,” June 6, 1863.

(23.) It was proved, in 1857, by the experiments of Drs. Maunoury and Pichot, that the *grease* of farriers is identical with *vaccinia* in the cow.* This doctrine was always maintained by Jenner, and received confirmation from the observations of Loy, Godine, and others,

(24.) Dr. Baillarger, of the Bicêtre, Paris, in 1862 drew attention to the occurrence of "*Bronchocele* in Domesticated Animals" † in France. In different localities in the Departments of the Isère and Savoie, he found that most of the *mules* had an immense hypertrophy of the thyroid body, larger proportionately than the bronchoceles of man. In one stable in Modane, of 20 animals, 19 were diseased. It was not so common among horses; yet, out of seven in one place four were diseased. It occurs also, in a diminished ratio, in dogs, cows, sheep, goats and pigs. The disease is probably due in them to the same endemic *causes* as in man, whatever these may be. It is asserted that the drinking water of La Maurienne rapidly produces hypertrophy of the thyroid in man. Unfortunately M. Baillarger does not, apparently, say to what extent *man* is affected with bronchocele in the districts in which mules are so remarkably diseased.

(25.) Dr. Blair, in his Report on the Fourth Epidemic, in 1851-2, of Yellow Fever in British Guiana ("British and Foreign Medico-Chirurgical Review," Jan., 1856), states that in the middle of 1850, *mumps* was epizootic and very fatal—thus considerably preceding in date the fever epidemic in man.

(26.) That *favus* is communicable, not only between different genera and species of animals, but between the lower animals and man, is shown by the following quotation from Bazin's "*Leçons Théorétiques et Cliniques sur les Affections Cutanées Parasitaires.*" ‡ "In 1854 several members of an American family, including a young physician, were surprised at the curious appearance of two caught mice, which were covered with yellow and depressed crusts of the true *favus* stamp. The victims were handed over to the cat, whose discussion of the delicacy was speedily followed by the appearance of the characteristic eruption below the eye. Nor did this chain of contagion end here, for two children, on intimate terms with the cat, were

* "Archives Générales de Médecine," April, 1857, pp. 365-398; quoted in "British and Foreign Medico-Chirurgical Review," Oct. 1857, p. 530.

† "Medical Times," Oct. 4, 1862, p. 366.

‡ Translated by a correspondent of the "Medical Times," in that journal for Jan. 14, 1860, p. 46.

shortly after seized with undoubted favus, affecting various regions of the body in succession. The identity of the disease was, in this instance, confirmed by M. Bazin himself, to whose interne a portion of the suspected crust was transmitted by an American friend."

(27.) The occurrence of *favus* in the lower animals is also noticed by Jonathan Hutchinson, in his Report on Favus,* wherein he hints at the possibility of its transmission from mice to man.

(28.) "*Ringworm*, communicated from Animals to Man," is the heading of an article or paragraph in the "North British Agriculturist," of April 12, 1871.

(29.) In 1859 M. Raynal informed the French Academy† that there then existed in certain parts of France among *fowls* a cutaneous affection, caused by a minute parasitic animal—the *Sarciceps nutans*—resembling the itch insect; that the disease resembled the *itch* also in its symptoms; and that it was communicable, not only from fowl to fowl, but to the horse, and other domestic animals, as well as to man.

(30.) M. Bourguignon, has published, in the "Annales des Sciences Naturelles," (Ser. IV., tom. iii., no. 2,) a series of "Observations sur la Contagion de la *Gale* des Animaux à l'Homme." In my French Dictionary (Surenne's, 1866,) the word "*gale*" is variously translated *itch*; *scab*; *ringworm*; *farcy*; *mange*; so that I am utterly at a loss to determine in what sense it is used by M. Bourguignon.

(31.) During the *Black Death* of the Middle Ages, not only men, but animals, at once perished, it is said, if they so much as touched anything belonging to the dead. Boccaccio, himself a medical man, relates that he saw two hogs upon the rags of a person who had died of this plague. After staggering for a short time, they fell down dead, as if they had taken poison.‡

(32.) The *Rinderpest* of 1865-6 caused the deaths of different genera and species of animals in the Jardin des Plantes, Paris.§ In Britain this form of cattle plague preceded a *cholera* epidemic of several months—an illustration of the intimate apparent association or inter-relation of epidemics and epizootics.

* "Medical Times," vol. xl. [for 1859], p. 654.

† Ibid., August 6, 1859.

‡ Review of Professor Hecker's "Epidemics of the Middle Ages," in "Chambers' Journal," Dec. 10, 1859, p. 375.

§ "Medical Times," Jan., 1866.

(33.) M. Tardieu, in an Essay on "Maladies accidentally and involuntarily produced by Imprudence, Negligence, or Transmission by Contagion," has a section on "Contagious Maladies transmitted from Animals to Man."*

(34.) The Irish Census of 1851 (vol. v., pp. 358-9) tells us that an "Epidemic constitution [of atmosphere] hung over Great Britain and Ireland for a number of years [from 1837 to 1851], favouring, if not determining the development of several deadly epizootics, affecting *all* classes of animals."

These illustrations of (*a*) diseases common to man and other animals; and of (*b*) diseases propagable to and from man and other animals, may easily be multiplied by any one who will give himself the trouble of following up the subject in the pages of the numerous veterinary and medical journals, especially of the Continent. But the illustrations already or above quoted suffice, I hope, to show (*a*) how many diseases of man—long supposed to be *peculiarly human*—are common also to other animals; (*b*) how much yet remains to be added to our knowledge of diseases that affect all or many classes of animals; (*c*) how likely it is that many diseases, still regarded as exclusively human, will yet be found to be more extensively distributed in the animal kingdom; and (*d*) why it is that we must look for diseases most nearly approaching, in their symptomatology and etiology, those of man, in animals which most closely resemble him in their structure and habits.

General Paralysis of the Insane—its Nosological Position. By G. MACKENZIE BACON, M.D., Medical Superintendent of the Cambridge County Asylum.

THE term "general paralysis" is not, it must be admitted, a satisfactory one, but, though many attempts have been made to improve upon it, nothing better has yet been agreed on. However faulty the term may be, it is best to have a clear understanding as to what the words may be supposed to imply.

In the last volume of the Guy's Hospital Reports, a writer, in some remarks on this subject, argues that the phrase

* "Annales d'Hygiène Publique." Jan., 1861; quoted in "British and Foreign Medico-Chirurgical Review," April 1861, p. 535.

"general paralysis" should include other cases than those to which it is applied in asylums, and that general paralysis of the insane is only one form of a diseased state of brain seen as much out of as in asylums.

He says (p. 183) "Under the term general paralysis of the insane, a very characteristic form of disease is implied, but if modified forms and early stages be included, the term is *equally applicable to other affections.*"

Again (p. 184), "I do not doubt that there is a very remarkable and common disorder which is generally known by the name of the general paralysis of the insane; but seeing that the term is by no means accurately defined, since the peculiar mental symptoms which have actually afforded a name for it in France are not always present, I cannot but find fault with it, and ask for one which is somewhat more restricted, or, if not so, demand that the present one be allowed to *include a much larger sphere of disease.*"

With every respect for the opinions of so able and distinguished a physician, I beg to offer a few remarks on this question from the "asylum point of view," and I believe my opinions accord with those of most asylum superintendents.

It has always seemed to me that the disease called general paralysis of the insane had a special character of its own, and differed from other sorts of brain affections seen among the insane, or even the sane. I have always restricted it to the familiar disease associated with grand delusions and a certain train of other symptoms, and I think the term can be of no value unless so restricted. The term is bad enough, but I cannot admit that any term descriptive of the disease in question is "*equally applicable to other affections.*" I should not myself apply it to a case of increasing feebleness of limbs without certain mental symptoms, and the course of the disease differs from that of chronic alcoholism, &c. The bodily symptoms of more than one general disease of the brain may be much alike at a given period, but the whole character of the earlier phases may have been very different. Some confusion may arise from the fact that all men do not use the term with the same care or precision in their statistics; but I think it may fairly be said that those living in asylums, as a rule, speak of but one condition under this head. I admit that such men are probably unfamiliar with some other paralytic states which are seen in hospitals, but it may be that a more extensive comparison of experiences would establish two distinct sorts of

disease, only resembling one another in the feature of paralytic enfeeblement.

General Paralysis of the Insane has some peculiarities in its history and symptoms which may serve to discriminate it from other forms of disease, such as these :—

It is not hereditary.

It occurs but rarely among women.

Certain mental symptoms are always associated with it, and generally precede the paralytic symptoms.

In most cases epileptiform attacks, affecting one side or one limb and half the face, occur during the second stage.

A curious amelioration takes place after a certain period, when cases are brought early under proper treatment. The “optimism,” the often furious character of the mania, the destructive tendencies, and the mixture of elation and confusion of mind, producing the most ludicrous contradictions, are such as are not seen in other forms of brain disease.

These phases recur so constantly, and in so many instances, that I do not see how to doubt that there is such a disease, whatever its name, and that it differs from others in which patients fade away gradually and die paralysed. It may be that those living in asylums have a more vivid impression of their own cases from seeing so much of them, and being so often perplexed in their treatment, and they may not be sufficiently attentive to other phases of brain degeneration, but it seems to me that history, symptoms and pathology point to a disease different from any other, and that the symptoms I have alluded to almost suffice to answer the question “what is intended by the term general paralysis?”

Supposing, however, that there are numerous other cases in which body and mind decay simultaneously, so as to deserve the title of dementia paralytica, how is it that so very few of these reach the public asylums, where the poor must needs be brought in course of time? Such cases are seldom to be found in them, whereas the other form is abundant in every county.

Various observers have worked out the pathology of this state, and enumerated sundry destructive changes in the cerebral substance, membranes and cord. It is, doubtless, not easy to attribute a distinctive pathology to every brain affection, but the *character* of the previous symptoms suffices to mark the nature of the disease.

The only difficulty to this view arises in considering cases said to have their origin in injury to the head; but as we

know little but the results of brain diseases, and nothing of how the changes are produced, a few such exceptions can hardly damage the general argument; moreover, the injury may be coincident with the early stage of the disease.

It is, perhaps, only natural that superintendents should take a rather one-sided view of this question, because they are forced to live in the daily observation of the peculiarities of their cases, and not only that, but of the whole *lifetime* of such cases, and of a repetition of them, for one general paralytic succeeds another year after year with unending regularity. This is different from the variety of cases that is seen in hospital practice, and doubtless superintendents would not be so ready in diagnosis had they to select the sheep from the goats in an offhand way. As it is the diagnosis is easy when any one lives among cases, and can observe for himself many trifles which otherwise would only come out, if at all, through the mind of an ignorant attendant.

Believing that general paralysis of the insane means a certain degeneration of brain, and has a pathological basis, it seems to me impossible to talk of a patient's recovery or to share the sanguine views of a physician who thinks he has cured a man by calomel baths, because the patient *appears* well nearly a year after. Every one knows there are long remissions in this disease, and I have had several patients who have kept out of the asylum for a year or two, but they inevitably come back to die. Whatever the hopes of the therapeutics of the future, I can see no reason to wander through the pharmacopœia in search of a drug to cure a disease which depends essentially on structural changes, when we know that these, at least in the brain, are not remedied by medicines. How can this disease be called an *opprobrium* to medical treatment, when it is only the evidence of an exhausted brain, produced by natural laws, as much as a liver is diseased by gin drinking? The opprobrium belongs to those who, in their greedy haste to be rich, or in their unbounded vanity, their drunkenness, or other excesses, reduce themselves to this state. The brain will no more recover itself than will the vigour of youth return to the septuagenarian.

I am well aware that all cases of general paralysis cannot be ascribed to the above causes, though a great many can, but every case is due to long-continued strain and exhaustion, and the disease is but the expression of the consequent degenerative change.

In conclusion, I should say that what is called general paralysis of the insane is a special form of brain disease, that it has a definite and regular course, with peculiar mental symptoms, which almost suffice to distinguish it from other forms of disease in which body and mind decay together. I have forborne to enter into a minute description of a disease only too familiar in our public asylums, because there are plenty of descriptions extant, though it must be remembered that it is only within the last twenty years that the materials for such experience have been accumulated in any quantity.

Asylum Notes on Scarlet Fever. By T. W. McDOWALL, M.D.
Edin., Assistant Physician, Inverness District Asylum.

In the "Journal of Mental Science" for April, 1863, there appeared a paper by Dr. W. Carmichael McIntosh, entitled "Asylum Notes on Typhoid Fever." In his introductory remarks, Dr. McIntosh notices the increased interest attached to the occurrence of physical diseases as observed in the insane, and the value of observations thereon, when the sane and insane suffer from the same disease and are under observation at the same time. There is then an opportunity of noticing the influence of such blood poisons as the scarlatinal and typhoid, as affecting two classes of the community; and as the patients are under medical observation from the very commencement of the illness, peculiar advantages are offered for a close investigation of all symptoms, mental and physical, from their first appearance. Dr. McIntosh further observes, "additional light might be thrown upon mental pathology and treatment, if such observations, sufficiently extensive, were correctly made and recorded. Alienists have long noted the influence of physical diseases in the course of an attack of insanity; and recently cases from foreign journals have been given by Dr. Arlidge, where recovery has followed wounds causing profuse suppuration in melancholia and general paralysis; scarlatina in suicidal melancholia; dysentery and acute rheumatism in monomania; dysentery and a compound fracture of the elbow in religious monomania; lastly, profuse intestinal hæmorrhage is mentioned by M. Baillarger, as ushering in recovery in a case of "painful hallucination of vision consequent upon injury from a railway accident." It is with the view of adding a few cases

to those which have already appeared in the various journals that the following examples of insanity, with intercurrent scarlatina, are published; so that when a sufficient number have been recorded they may be collected for comparison and further examination, and it may be that some useful and interesting results may be obtained. For as we are in the habit of watching the effects of drugs introduced by ourselves in cases of insanity, in the hope that ultimately we may arrive at a scientific method for such medicinal treatment, there appears no reason why we should neglect, but rather the reverse, the observation of cases in which, through contagion, a specific blood poison has been introduced into the system, and which produces characteristic and obvious symptoms. In the present state of matters one would scarcely feel inclined or be justified to run the risk of exposing an insane patient to the poison of typhus or measles for the chance benefit which might result to the mental state; but it is not unreasonable to think that some day we shall be able to modify the course of many diseases, perhaps mental among the others, as we now do in the case of small-pox through vaccination.

The epidemic of scarlatina appeared in the Inverness District Asylum during November, 1869, and the disease was entirely confined to female patients and attendants, although several male patients suffered from a severe form of sore throat, so frequently observed during the prevalence of scarlet fever. Five patients, two attendants, and one housemaid were affected, and fortunately all made excellent recoveries. Although the matter was fully investigated at the time, no definite information could be obtained as to the probable means by which the disease was introduced into the asylum; but there are reasons for believing that the person who first showed symptoms of fever, a patient, received the germs of the disease through remaining in the visiting-room with her relatives for a considerable time, seeing that they came from a part of the country where scarlet fever was known to exist, though they denied the existence of the disease at home or in any house where they had lately visited. As is usual in such cases, the difficulties in obtaining absolutely reliable information as to the presence or absence of fever from the houses which attendants visit when on leave prevent a trustworthy conclusion being arrived at. Whenever the first case occurred immediate steps were taken to prevent the spread of the disease by at once removing her from her neighbours, and completely isolating her from the rest of the house; in fact,

the method of "stamping out" the disease was adopted, and with moderate success.

The first person attacked was a female patient, C. F., æt. 20, who concealed her illness as long as possible. On 22nd November, however, she felt so ill that she was compelled to lie in bed. She stated that six days previously she had a severe shivering, and that since that time the same symptom had returned frequently, followed always by a severe burning sensation throughout the body; her appetite had gradually failed, and she had slept but little, her occasional snatches of sleep being disturbed with dreams, and quite unrefreshing. When examined on the 22nd November, the patient complained of pain throughout the body, severe headache, distressing sensation of throbbing in the cardiac region and in the head, great thirst, sleeplessness, severe pain in the throat, which was intensely congested and much swollen. Pulse, 140; temp. 103·5°. To shorten the description, it may be said that she had all the usual symptoms of an acute febrile attack, and she was treated accordingly. On the 24th November, a bright scarlet eruption was observed over the neck and chest, clearly indicating the true nature of the disease, had any doubt existed previously. Pulse, 150; temp. 104°. It is unnecessary to go fully into all the details of the symptoms as they appeared from day to day, suffice it to say that the case was one of a moderately mild type; convalescence set in on the 28th November, when the patient expressed herself as being much better, though the pulse still remained high, 146 per minute, and the sensation of pulsation in the chest, head, and neck proved most distressing to the patient, almost entirely preventing sleep. On the 29th November the pulse fell to 118, and the temperature in the axilla to 102·5°. Desquamation had appeared on the face, and at length affected the whole body. The treatment throughout the whole course of the disease was extremely simple, consisting of a gentle purgative at the commencement of the illness, and repeated occasionally as required; a simple febrifuge mixture of aq. ammon. acet. and camphor water, a solution of chlorate of potass as a drink to allay thirst, and the diligent application of heat to the throat by means of poultices applied frequently, and by the inhalation of steam.

In regard to the mental history of the preceding case, it may be stated that she was admitted into the Inverness District Asylum in May, 1868, suffering from mania of a very peculiar type. She was highly erotic in look, and behaved

very indecently whenever she had an opportunity ; she was filthy in conversation, and violent in word and action. Her delusions as to her bodily conformation were well marked, and these remain to the present day. She maintained that her whole body was empty ; that she was a beast, and not like other people ; that one half of her body was large and the other small ; that it was not she who said these things, but a voice speaking through her, &c. When she said she was a beast, she mewed like a cat, and made other peculiar noises in corroboration of her statement. She also affected to act the part of the fine lady, complained of everything done to, or for her, would not condescend to work or walk with the other patients, indulged in frequent bursts of anger, often without the slightest provocation, and would end by assaulting all near her, smashing windows and tearing her clothes. Various forms of medicinal treatment were tried in this case for some months after admission, but without the slightest benefit, and at the time of her scarlatinal attack her mental condition remained very much as on admission, only the violent outbursts of passion and eroticism occurred at intervals of some weeks, or even two or three months, and alternated with periods of quiet and comparative decency. At such times her corporeal symptoms were very anomalous, and would generally be included under the name of hysterical. Much of her distress arose from menorrhagia and severe attacks of derangement of the digestion, but observation failed to trace any immediate connection between her various mental states and the morbid condition of her bodily organs. During her attack of fever, it may be said that her mental condition was such as had frequently been observed when the patient was in her best moods, and which had previously been present when she was confined to bed on account of her gastric derangement. She answered questions quietly and correctly, and behaved with the utmost propriety ; in fact, she appeared too much engaged with her sore throat and other painful sensations to be inclined to indulge in her usual improper conduct and conversation. As she progressed towards recovery, she relapsed into her former mental state, and her conduct became so improper, and her conversation so indecent, that her neighbours complained ; and had it not been for the fear of spreading the fever through the asylum, she would have been removed from the ward. It cannot be said that, in this instance, the scarlatinal fever poison exerted any specific influence upon her mental condition, for, as has

already been stated, the same change had frequently been observed when she suffered from gastric derangement. The patient is still an inmate of the asylum, unchanged in either her bodily or mental health, and to this day she retains a lively recollection of her sufferings when ill of the fever.

The next to fall ill was an attendant, H. M., æt. 21, a strong and healthy girl, who had never been seriously ill during her life. She first felt unwell on the 21st November, having a severe headache, sore throat, urgent thirst, &c., and on the 24th she was quite unable to rise. She now came under medical observation, and being somewhat relieved after a gentle purgative and other treatment, she got up and attempted to go about her ordinary duties, but was sent to bed again immediately. By this time the eruption had appeared brilliantly on neck, shoulders, arms and chest. The pulse was 136; the temperature 102°. Appetite completely gone; tongue covered with a light white fur, except at the edges, which were red. The distress from pain in throat was very urgent, and the patient suffered much from want of sleep. It is needless to record all the physical symptoms as observed in this case; that has been done often enough elsewhere, and they may be summed up as those usually present in simple scarlet fever. Throughout the attack she was free from delirium, but, as already mentioned, suffered much from sleeplessness. She was greatly alarmed about her state, fearing much that she would die. After recovery, she stated that her mental distress from this constant fear of death was indeed very great, and that, though she tried earnestly to direct her thoughts in other directions by interesting herself in the movements of the nurse and other occurrences around her, her mind refused to be so engaged but for a few moments, and then returned to the gloomy meditations in which it had previously been occupied. She was thus haunted with a constant fear of death.

In 1866 I myself suffered from a severe attack of scarlatinal sore throat, followed by acute general dropsy, and I have still a vivid recollection of the miserable nights during that illness. All inclination to sleep was banished; the pain in the throat was intense, increased as it was by constant efforts to swallow, induced by the presence of a large quantity of thick mucus which lodged in the throat. The thoughts which chased one another in rapid succession through my mind were miserable enough; there was a vague feeling of terror, and dread of evil to come, but no special

fear of death was present as in the preceding case. It cannot be said, however, that there is anything characteristic in such mental phenomena; they may be observed in most acute and many chronic and painful diseases.

The preceding case made an excellent recovery, and, as in that first recorded, the treatment was very simple, and in all essential points quite similar to that followed previously. The diet consisted of a good allowance of beef tea, milk, and such soft, nutritious food as the patient could swallow. In fact, in all the cases medicinal treatment was reduced to a minimum, and it may be said that they were allowed to run their own course, the patients being carefully watched during their illness and convalescence to prevent any chance of catching cold, and thereby running the risk of acute dropsy appearing, a much more serious event, as a rule, than an attack of simple scarlet fever. Fortunately all the cases escaped without such a complication.

On the 14th December, two new cases were admitted into the fever ward. One was a very strong, healthy girl, A. C., æt. 19, a housemaid; the other, a somewhat feeble creature, who had been an inmate of the asylum since July, 1867. The first of these, A. C., had never been ill in her life, and, like her fellow-servant, she was greatly alarmed about her condition, occasionally weeping and begging for her parents to be sent for, as she feared that, unless they came quickly, she would never see them in this life. Without her condition being actually dangerous, her attack of fever was a very smart one, and it can scarcely be doubted that she increased her sufferings through attempting to conceal them by working about the house in her usual manner. When first examined, the eruption had appeared over the greater part of the body, and was very brilliant on the chest and shoulders. Her pulse was 135, and the temperature of the axilla $103\cdot2^{\circ}$. On the nights of the 15th and 16th December she was slightly delirious, talking occasionally in a rambling manner, and at times she sat up in bed and motioned as if she intended to get out of it. On the 19th December, all the symptoms had much abated; her spirits had revived, and it was only necessary to observe the altered expression of the face to know that the patient felt better. In about a fortnight she was allowed to leave her bed; in a month longer she was sent home, and after a short holiday returned, having completely regained her former health and strength.

The patient admitted to the fever ward on 14th December

(J. M., æt. 24) had been insane since April, 1867, and when admitted into the Inverness District Asylum in July, her condition was as follows:—She was pensive and prudish, seeming to retire from observation, yet evidently in such a way as to attract it. She boldly asserted her depression to be not insanity, but the natural result of the death of her lover from scarlet fever, and she sought sympathy by her tears and by a very natural expression of regret that she should have been sent here. After a fortnight or three weeks' residence, however, because for a time she had evidently been controlled by her change of circumstances, her tendencies manifested themselves strongly, and since that period they have occurred weekly, and generally on Sunday. Capricious, passionate, and irritable, she has broken out without cause, abused those around, wrought herself into a hysterical condition, and is generally seen with dishevelled hair and disordered dress, sobbing, and ready, even at a word, to break into ill-temper. At such moments her language is rash, her acts impulsive, and she has endeavoured to dart through a window, and attempted suicide by strangulation with her apron and her garter. Immediately before her attack of scarlet fever, her mental condition was as follows:—It would be almost impossible to describe the variability of this girl, who is rarely, if ever, seen in the same mood. At one time she is pleased and flattered by attention, smiles complacently when complimented, and walks off with an air of becoming dignity; the next moment, however, she may dash at those approaching her, attack them savagely, lift chairs or whatever is within her reach to hurl at them, and then break out into perfect torrents of abuse. Highly vain, she at one time is seen dressed with the utmost neatness, and decorated, perhaps, somewhat fantastically; at other times she is extremely untidy, and walks about with her dress in disorder and her hair dishevelled. In the excess of this vanity is, no doubt, to be sought the starting point of her extreme suspicion and belief that every one of the opposite sex who approaches her has designs upon her virtue. Associated with the same feelings are also the most prominent of her other delusions, viz., the recognition of those around her as persons whom she formerly met, and she has pointed out individuals whom she believed she had seen shut up with her in a closet in a poorhouse, and whom she evidently regards as nourishing designs for her ruin. It is to be remarked that her periods of excitement correspond with the interval preceding the appearance of the

catamenia, or during its flow. It is interesting to notice in passing that the menstrual discharge is always accompanied by inflammation of the conjunctiva.

Immediately before her attack of scarlet fever, the patient was in one of her disagreeable moods, resenting all interference; but as her bodily sufferings increased, she became much more agreeable, and was much more easily managed than could have been expected; in fact, during her illness her mental state was as good, if not better, than it had been since her admission. She remembered that her lover had died of the same disease as she then suffered from, and she remarked, as a curious occurrence, that she should have become similarly affected. During her convalescence, and for many weeks afterwards, she continued quiet, agreeable, and cheerful, but gradually any favourable impression which her fever might be considered as having made on her mental symptoms disappeared, and she lapsed into her former state, and continues so at the present time.

On the 17th December, an attendant, M. S., æt. 24, showed all the premonitory symptoms of an attack of fever. She was, indeed, a very bad subject for any acute disease, being unnaturally stout for her age; besides, her mental constitution was not such as would comfort her during her illness, she being at all times impatient of suffering. The disease ran its usual course, and it would not have been necessary to mention this case at all, had it not been that, during the height of the fever, she became subject to a remarkable hallucination of sight. During the early morning she was sitting up in bed, steaming her throat, when, on suddenly turning her head to the door of her room, she saw an old and hideous woman enter and cautiously approach her bed. The attendant was naturally alarmed at such a visitor, and cried for the nurse, who had left the room but a few minutes before. The old woman carried her apron in her hand arranged as a bag, which appeared full of something. When she had come quite close up to the bed, to the intense alarm of the patient, she opened the apron and shook the contents over the bed and its occupant, and immediately slipped out of the room. To the eyes of the patient the bed clothes and her own person appeared covered with lice, and in the greatest distress she cried for the nurse, who, hurrying in to see what was wrong, was well abused for neglecting her duty in allowing such an abominable old woman to enter the asylum during the night. Though firmly assured that no woman had been there, and

that the bed was free from all vermin, the patient lamented her case during the whole night, shedding many bitter tears. Towards day-break she fell asleep for a short time, and when she awakened the hallucination had disappeared, but the recollection of her midnight visitor was clear and vivid—indeed, painfully so, for she experienced some difficulty in persuading herself that the whole affair was the creation of her disturbed brain.

Another female attendant fell ill on the 19th December, but her case presented nothing of special interest, or worthy of record. She passed through the ordeal in safety, and made an excellent recovery.

The last case to be recorded occurred in a female patient, J. F., æt. 27. This is certainly the most interesting of all the cases, as here we have an example of marked mental disturbance during the attack of scarlet fever, and during her convalescence. The previous history of her case is shortly as follows:—When admitted into the Inverness District Asylum she was suffering from an acute attack of mania of five days' duration, caused, it was stated, by disappointment in love matters. Her first attack of insanity occurred when she was twenty years of age, and since that time she had one or two attacks, from which she speedily recovered, not requiring to be sent into an asylum. During the present attack, however, she was very noisy and troublesome at home, and her symptoms, as detailed in the medical certificates, would appear to indicate an acutely maniacal condition. Her bodily health was not good, the patient being markedly anæmic. Ten days after admission, the following note was made as to her condition:—"She appeared to make herself quite at home when admitted, and has been very industrious at all kinds of household work. Her conduct has been correct and orderly, and only on one occasion did she become troublesome to an attendant by demanding to be allowed to go home, and by attempting to take the keys from her. She has been rather reserved in conversation—at least to the medical officers, but she explained to the attendant that she had been badly used by the men to whom she had been engaged—one of them a minister and the other a butler in town. In a few days she became more communicative, and stated that she was engaged to be married to a certain reverend gentleman; that there had been no regular courtship, but he had simply intimated from the pulpit his intention of marrying her. She slept well at night until the 9th

October, when she became very noisy and delusional. She imagined that she was in labour and about to be delivered of a child. She mistook the attendants for midwives, and begged them to attend her. During this supposed labour her sufferings must have been great, should we judge by the accompanying noise, for her cries were loud and frequent. Having failed to be delivered on the 9th October, she looks forward to the early birth of the child; but she does not at all times insist on this delusion, as she occasionally admits such fancies to be "nonsense."

From this time to her attack of fever her state was on the whole satisfactory, and nothing more was heard of marriages or births. On the 12th of December it was noted that the patient had been very dull and depressed for two days, but this was attributed to her being then "unwell." On that day, however, she complained of pain in the throat, which was found to be highly congested. Her pulse was 100; temperature, 101°. She refused to give any information as to her condition, would not allow an inspection of her chest, covered herself up in the bedclothes, and ordered every one to leave her. Next day she was no better, and would allow no medical examination, not even her pulse to be counted. That she was ill was evident from her appearance, and besides, there was a slight scarlet rash visible on the face. Her throat was so sore that she was quite unable to swallow. She refused to answer any questions as to her bodily sufferings, but spoke in an exceedingly unnatural manner of her father, against whom she expressed the utmost hatred for sending her to an asylum. This state of perverted affection continued until the 17th December, when it disappeared, and the patient appeared much ashamed at what she had said. With this mental improvement there also appeared decided relief from bodily suffering. She also answered questions as to her state, and admitted that a scarlet rash had appeared on the chest and other parts. All doubt as to this matter was subsequently put an end to by the appearance of desquamation of the cuticle. During the night of the 17th she did not sleep, but was more or less excited; laughed, talked, and joked in an unseemly manner, and when visited by the medical officers she was very indecent. These variations in her moral character are interesting; the latter-mentioned perhaps not so much, as it may have been caused by the bad example of one of her neighbours—the patient whose case is first recorded in this paper. Her attack of filial revolt corresponds somewhat to an occurrence mentioned

by Dr. McIntosh in connection with one of his typhoid patients. He says—"During the early part of his convalescence he wrote his father a very sensible letter, in a clear and legible hand, an effort which he had not attempted for years previously. His feelings in regard to his mother were also changed at this time, and he was anxious to see her, whereas he had formerly shunned and abused her. His friends stated that he had an attack of scarlet fever some years ago, and that ever since his antipathy to his mother was marked." It is thus seen that in Dr. McIntosh's case the derangement of feeling was chronic, whereas in the present case it was transient. To conclude the history of this case, it may be stated that no medical treatment was possible; that the patient made an excellent recovery from her attack of fever, and in March, 1870, was discharged recovered from her mental derangement, and she has continued well since that time. Previous to her discharge her bodily health had decidedly improved under a prolonged course of iron.

As already mentioned, several cases of severe sore throat occurred among the patients and attendants in the asylum during the prevalence of scarlet fever. These, however, call for no special notice, as nothing unusual occurred in the mental or physical symptoms of those attacked. One or two of the patients were irritable enough, it must be confessed, but that is no unusual symptom in many diseases occurring in other than insane persons.

To speculate as to the ultimate cause of the various mental manifestations already recorded might be a very easy matter, but it certainly could not be profitable. The truth appears to be that in times gone past we have had little but speculation, fine hair splitting and ingenious hypothesis, in place of industrious and painful observation, by which alone progress can be made. Psychologists, until recent times, appear very much to have acted the part of the men who keenly discussed the colour of a chameleon; they neglected full observation, and thus arrived at but part of the truth.

I must express my obligation to Dr. Aitken, the Medical Superintendent, for his kindness in permitting me to utilise the information concerning the preceding cases, contained in the Case Books.

Statistics of Pauper Insanity. By R. BOYD, M.D., F.R.C.P.,
President of the Medico-Psychological Association.

At the last annual meeting of the Medico-Psychological Association, held at the College of Physicians, London, in July, 1870, I brought forward a resolution which, after full discussion, was amended and agreed to, in these terms:—“That it is desirable to facilitate the early admission of all acute cases of pauper insanity into county (and borough) asylums, by providing for the proper care and treatment of chronic and harmless cases elsewhere.” The object of the resolution being to ensure for acute cases that prompt treatment which is so essential, and to prevent the overcrowding and overgrowth of asylums, by providing for the transfer of incurable and harmless cases to workhouses, or to lodgings, or to reside with relatives, under proper care, treatment, and supervision. In the absence of any such provision, the enlargement of asylums progresses—this will be shown by the returns of the increase of pauper insanity in England and Wales. Several institutions have attained such dimensions that the difficulty of proper management has become great. In such overgrown establishments the individuality of the curable patient is liable to become lost amongst the crowd of idiots and incurables. The delay in obtaining the forms required by the Lunacy Acts, prior to the admission of insane patients to pauper asylums, is a great hindrance to early treatment. As regards chronic cases, this delay is of little consequence, and from the comforts being greater in the asylum than in the workhouse infirmary, and it being to the interest of workhouse officials to send insane paupers to the asylum, the accumulation of chronic and incurable cases therein can easily be accounted for.

Insanity is most frequently associated with organic disease, and ought not to be so much regarded as a speciality, but rather as coming more under the general head of medical relief. Unfortunately, under the Poor Laws, a sufficient distinction has not been made between the able-bodied and the sick, and medical relief has been administered with so niggardly a hand that in the discussion respecting the transfer of chronic cases of insanity to the workhouses, at the meeting referred to, it is not surprising that there should have been a very general condemnation of those institutions.

The "penny wise and pound foolish" policy of the Poor Law authorities has led to great and useless expenditure to the public, in providing accommodation in asylums for the progressive accumulation of chronic and incurable cases.

The following statistics of pauper insanity are taken from the Annual Reports of the Poor Law Board, which are compiled from the lists made out annually by the clerks to the Guardians, from information obtained from the Medical Superintendents of Asylums and Poor Law medical officers, and transmitted to the Poor Law Board, in compliance with the 16th and 17th Vict., c. 97, s. 64, and in the form provided by schedule D. of that statute:—

TABLE SHOWING THE PROGRESSIVE INCREASE OF PAUPER INSANITY IN ENGLAND AND WALES, THE POPULATION BEING 20,061,725 (CENSUS, 1861).

Number of Paupers on 1st January.		Whereof were Insane Paupers.		Namely, Lunatics and Idiots.		
Years.	Numbers.	No.	Per Cent.	Males	Females	Total.
1859	867,543	30,318	3·50	Lunatics ... 9,280	12,152	21,432
				Idiots ... 4,109	4,777	8,886
1860	854,896	31,543	3·71	Lunatics ... 9,677	12,711	22,378
				Idiots ... 4,229	4,936	9,165
1861	891,868	32,920	3·69	Lunatics ... 10,071	13,516	23,587
				Idiots ... 4,342	4,991	9,333
1862	946,166	34,271	3·62	Lunatics ... 9,825	13,135	22,960
				Idiots ... 5,111	6,200	11,311
1863	1,142,624	36,158	3·17	Lunatics ... 9,828	13,204	23,032
				Idiots ... 5,962	7,164	13,126
1864	1,011,753	37,576	3·7	Lunatics ... 11,891	15,699	27,590
				Idiots ... 4,580	5,406	9,986
1865	974,772	38,487	4·0	Lunatics ... 12,259	16,207	28,466
				Idiots ... 4,569	5,454	10,021
1866	924,813	39,827	4·3	Lunatics ... 12,763	16,854	29,617
				Idiots ... 4,674	5,536	10,210
1867	963,200	41,276	4·3	Lunatics ... 13,384	17,521	30,905
				Idiots ... 4,773	5,598	10,371
1868	1,040,103	43,158	4·3	Insane ... 19,033	24,125	
1869	1,046,569	45,153	4·3	Insane ... 20,045	25,108	

In 1859, it appears from the above, that 3·50 per cent. of the pauperism on the 1st of January was ascribable to insanity, the lunatics being 2·47, and the idiots 1·03 per cent. In regard to the sexes, 13,389 were males, and 16,929 females. It is worthy of remark that, while the females considerably preponderate among the lunatics, they do not much exceed the males among the idiots. But taking the two classes together, the ratio of females to males is not so great as it is in the population at large, in which, among the adults, the

females are more than double the number of male recipients of relief. The returns of pauperism do not distinguish the sexes of the children, but there is no reason to suppose that, if they were discriminated, the proportion would be materially changed.

From 1860 to 1863, there was a gradual increase in the number of paupers; in the three following years a gradual decrease; and a gradual increase again from 1867 to 1869. The number of *insane paupers* has continued to *increase* year by year, from 1859 to 1869, from 30,318 to 45,153; the percentage of pauperism ascribed to insanity has risen from 3.50 to 4.3, the lunatics being 2.47, and the idiots 2.03 in 1859, and the lunatics 3.2, and idiots 1.1 in 1867. The lunatics and idiots have not been separated in the last two years. The proportion of idiots to insane persons is between one-third and one-fourth, *i.e.*, 29.3 per cent. for the whole country. But there is considerable variation in different unions, counties, and different divisions. In the Metropolis it is lowest, 9.5 per cent.; in North Wales, where it is highest, 52.3 per cent.

The total number of paupers of all classes, and the number of insane paupers on the 1st January, in the Metropolis, which includes part of Middlesex, part of Surrey, and part of Kent; of the South Western division, which includes Wilts, Dorset, Devon, Cornwall, and Somerset; of the North Western division, which includes, Chester and Lancaster; and of the Eastern division, which includes Essex, Suffolk, and Norfolk, was as follows:—

Metropolis.			South Western.		North Western.		Eastern.	
Years.	Paupers in receipt of relief on 1st Jan.	Whereof were Insane Paupers.	Paupers in receipt of relief on 1st Jan.	Whereof were Insane Paupers.	Paupers in receipt of relief on 1st Jan.	Whereof were Insane Paupers.	Paupers in receipt of relief on 1st Jan.	Whereof were Insane Paupers.
1859	97,707	4,661	107,405	3,303	92,016	3,370	76,236	2,063
1860	94,774	4,818	104,401	3,415	83,234	3,513	77,664	2,190
1861	103,936	5,146	105,786	3,446	84,525	3,674	82,330	2,282
1862	103,431	5,378	107,676	3,513	106,415	3,974	82,661	2,317
1863	106,407	5,701	108,795	3,635	287,564	4,196	81,279	2,368
1864	103,468	5,859	108,628	3,705	177,246	4,579	80,771	2,456
1865	105,351	5,933	108,316	3,882	138,549	4,593	79,667	2,544
1866	111,019	6,214	109,410	4,024	102,201	4,795	76,566	2,589
1867	138,706	6,559	110,868	4,055	100,047	5,082	77,564	2,609
1868	163,170	7,063	114,784	4,165	114,578	5,229	81,287	2,666
1869	156,109	7,524	117,142	4,222	111,444	5,598	83,463	2,802

From the above, it appears there has been a progressive increase of pauper insanity, especially in the Metropolitan Division. If we go back to the year 1852, the total number of all classes of the insane chargeable to the poor rates on 1st January, 1852, was 21,158, or 23 per 1,000 paupers; on the 1st January, 1869, they amounted to 45,153, or 44 per 1,000 paupers; thus exhibiting in the course of 17 years an increase of 91 per cent. in the ratio.

Table, showing the number of Lunatics, Idiots, and other persons of unsound mind, in England and Wales, who were chargeable to the poor rates on the 1st of January in each year, and where maintained, the entire population of England and Wales being 20,061,725 (Census, 1861) :—

Years.	No. of Paupers receiving relief on 1st of Jan., in England and Wales.	No. of Insane Paupers.	Where Maintained.				
			In County or Borough Asylums.	In registered Hospitals or Licensed Houses.	In Unions or Parish Workhouses.	In Lodgings.	With Relations.
1859	867,343	30,318*	14,481	2,076	7,963	906	4,892
1860	854,896	31,543	16,201	1,143	8,210	785	5,204
1861	891,868	32,920	17,373	889	8,543	758	5,357
1862	946,166	34,271	18,318	1,193	8,603	985	5,172
1863	11,42,624	36,158	19,127	1,418	9,208	973	5,432
1864	1,011,753	37,576	20,257	1,196	9,608	864	5,651
1865	974,772	38,487	20,910	1,264	9,756	1,041	5,516
1866	924,813	39,827	21,986	1,288	9,973	993	5,567
1867	963,200	41,276	23,173	1,206	10,324	1,005	5,568
1868	1,040,103	43,153	24,297	1,348	10,684	1,015	5,784
1869	1,046,569	45,153	25,460	1,541	11,183	938	6,031

* 3·50 per cent.

The greatest increase has been in those maintained in asylums, and there has been a very large increase in those maintained in workhouses; and when it is seen that eighteen thousand of the forty-five thousand insane paupers are uncertified, not under the lunacy laws, being maintained in workhouses, or boarded out, and regarded as recipients of *medical relief*, separate rules and management for this numerous class are not necessary.

The proportion of sick to out-door poor is 12·8 per cent; the in-door sick poor is greater in proportion in London workhouses than elsewhere, from 32 to 48 per cent.; in provincial workhouses, 28 to 30 per cent.

The number of paupers in 1867 was about the same as in 1851, the numbers being 930,000 against 940,000; but the

cost in 1867 was £7,000,000, and in 1851 £5,000,000, an increase of 40 per cent. The sum of £5 10s, on an average, was spent in relieving each pauper in 1849-53, against £7 10s in 1869, the increase being 36 per cent.

The progress of the cost, as well as of the numbers of lunatics, has been remarkable. In 1862 the cost of lunatics maintained in asylums was £482,425; for the year 1869, it was £710,941, being an increase of 47 per cent. in the seven years.

Proportion of expenditure under 6 heads:—

	1862.	1869.
In maintenance	18·7 per cent.	20·2
Out relief... ..	51·9 „	48·0
Lunatics in Asylums } and Licensed Houses }	7·9 „	9·3
Workhouse cases	3 „	2·7
Officers' salaries	11 „	10·4
Other expenses	7·5 „	9·4
	<hr/> 100	<hr/> 100

A Case of Cerebro-Spinal Meningitis. By T. S. CLOUSTON, M.D.

Considering the amount of attention which has lately been given to cerebro-spinal meningitis, and the obscurity which still hangs over the disease, I think the following case, which occurred in the Asylum at Carlisle, in April, 1867, worthy of record. It was a sporadic case, but its accessories and accompaniments invest it with some of the interest of those epidemics of the disease which have lately occurred:—

T. C. had been a patient in the asylum for five years; he had laboured under melancholia with periodic exacerbations and suicidal tendencies. On the whole he enjoyed very fair bodily health, except when he became somewhat weak at times from refusal of food. But he generally got over this in a few days. He had most obstinate and severe psoriasis over shoulders, arms, hands, and legs.

One cold, raw day, when out at work on the farm, he felt chilly, and after coming in had a rigor. At night he complained of pain in his left side over the eighth rib, and headache, and was a little feverish, but nothing amiss could

be detected by auscultation. On the following day he still complained of the pain in the same part, but still there were no physical signs of any lung disease until the evening, when minute crepitation, dulness, and friction were discovered over the base of both lungs posteriorly, but principally over left. The case was assumed to be one of ordinary double pneumonia, and treated accordingly with hot fomentations, a saline mixture, stimulants, and good food. He continued steadily to get worse, but all the symptoms were referred to the pneumonia until the fourth day from the rigor, when he became so stupid and restless that it was clear his brain was affected in some way. He refused food, he did not understand questions put to him, he got out of bed constantly, and there was a peculiar tremor of the chin. But, being an insane patient, those symptoms were referred to the aggravation of the mental malady, which often accompanies severe bodily diseases. There was no paralysis of the legs or arms, for he could walk about and resist food being put to his mouth till the sixth day, when he became comatose. He remained quite comatose during that and the following day, when he died. There were no convulsions, and he ceased altogether to cough, so that his death appeared to be the result of the blocking up of the bronchial tubes. During the whole of his illness he had been hot and feverish. Before he became comatose he groaned as if in agony. He had severe herpes of the lips from the beginning.

Autopsy.—The dura mater was strongly adherent to skull cap, but separable without laceration. When removed it seemed to be normal in appearance. The arachnoid was opaque, and adhered to the morbid structure under it. This consisted of a yellowish purulent substance, which almost covered the convolutions and filled up all the interstices between them, being an eighth of an inch thick over the hemispheres, and between the cerebrum and cerebellum a quarter of an inch in thickness. It looked like ordinary pus, but it could be removed in cakes, and was of a cheesy, friable, semi-fibrous consistence. It was thickest over anterior lobes, round the pons, and under the posterior lobe. It was completely incorporated with the pia mater, and dipped down with it between the convolutions. The base of the brain was covered with it. The brain substance was dark in colour, the white substance very vascular, and so soft in the middle lobe of left side and outside the lateral ventricle of left side that it could be easily broken up by a small stream of water. The ventricles con-

tained a normal quantity of fluid. The cerebellum was vascular and dark in colour.

The medulla oblongata was covered all round with the purulent cake, and on section was vascular to an abnormal extent.

The spinal cord was covered in its whole extent by a layer of the same firm purulent matter about one sixteenth of an inch thick. The arachnoid of the cord was still somewhat transparent and adherent to the morbid substance. This was easily separable from the cord, leaving the nerve structure dark in colour and abnormally vascular. On section there was abnormal vascularity seen everywhere. Unfortunately an accident happened to the pieces of brain and cord, which I put up in absolute alcohol and solution of chromic acid for microscopic examination.

On opening into the chest there was found, in the left cavity of the pleura, a cake-like layer of thick, cheesy, purulent substance, easily separable from the serous membrane, denser where in contact with the pleura, softer and more pultaceous inside, and containing a dirty serous fluid. It looked exactly like the substance that overlaid the brain and spinal cord. On section the lung was found to be in a state of red hepatization in its two lower thirds. The upper third was somewhat congested and œdematous.

The right lung was adherent by recent adhesions, and was covered by a morbid substance similar to that found over the left lung and nervous centres. The lung substance of the lower lobe was much congested and condensed, but floated in water. The upper lobe was normal.

The heart and abdominal organs were normal, except some ecchymosed spots towards pyloric orifice of stomach, and the spleen was large and soft ($7\frac{1}{2}$ ozs. in weight).

On a microscopic examination of the morbid structure found in the chest, it was seen to be composed almost entirely of pus cells, with some ill-formed fibres holding them together into some degree of solidity.

This man had died on the 16th April, and on the 22nd there died, in another ward, a general paralytic in the third stage of the disease, his life being terminated in the ordinary course of the disease apparently; but, on a *post-mortem* examination, the pleuræ over the base of both lungs were found covered with the friable, cheesy, purulent-looking substance, to the thickness of one-eighth of an inch. It had precisely the same consistence and the same appearance as the morbid substance found six days before in the case of

cerebro-spinal meningitis, and it had the same microscopic appearances. It could be easily separated from the pleura in the same way, and was so characteristic and peculiar, that there was no mistaking it for the products of ordinary pleurisy. But this man's brain only showed the ordinary morbid appearance of a general paralytic, and his spinal cord was quite normal. The mucous membrane of the stomach was very much thickened and, towards the pyloric orifice, was covered with black ecchymosed spots, from the size of a pin's point to that of a split-pea. The spleen, too, was large and soft ($7\frac{3}{4}$ oz. in weight).

On the 29th of April, or a week after this last man died, an old man, who had long laboured under chronic bronchitis, got rather suddenly much worse, became feverish, his breathing impeded, and he died on May 3rd. At the autopsy, I found the pleuræ of both lungs to be covered with a very thick layer of the same yellowish cheesy substance. The bronchial tubes showed signs of old inflammation, and there was slight pneumonia at base of left. There were also a few small nodules of stationary tubercle. The pericardium contained about two ounces of yellowish fluid, and its surface was covered with granulations of the same substance as was found on the pleura, only more firm, and less easily separable from the membrane. The brain and spinal cord presented no signs whatever of any inflammatory action. The stomach was not examined. The spleen was soft.

Remarks.—The case of T. C. derives its chief interest from its pathology and its connection with the two other cases. The symptoms during life cannot properly be compared with the recorded cases of cerebro-spinal meningitis on account of the insanity of the patient. But there were present the spasmodic movements, delirium, high temperature, and coma recorded by Stillé. I think all the evidence points to a simultaneous seizure of the pleura and nervous centres. Great headache accompanied the pain in the side from the first; the mental state after the first four days was not accounted for by the insanity, and the characteristic cheesy, solid pus was in the same state of organisation on the pleura and on the nervous centres. The rapid course of the disease closely resembled some of the recorded epidemics.

The *post-mortem* appearances agree with those noticed by most other observers. Both pleurisy and pneumonia are noticed as having been present in this disease, but the chief peculiarity of this case I consider to have been that those

affections seemed to be *an essential part of the disease*. The serous membranes of the arachnoid and pleura were throughout their extent lying in contact with and adherent to a peculiar purulent formation, and yet those membranes themselves were not affected as they ordinarily are after acute inflammation—when the cheesy pus was scraped off them (which was quite easily done) a comparatively smooth surface was left. The dipping of this substance down along with the pia mater to the very bottom of the convolutions was a remarkable circumstance. It did not dip so into the fissures of the spinal cord.

The reasons for my connecting the other two cases with this one of cerebro-spinal meningitis are these:—1. The characteristic cakey purulent substance was the same in them all, and was so very peculiar in its appearance, that I have never met with it before or since in 180 *post-mortem* examinations which I have made in this asylum. 2. The pleuræ were affected in all of them, and were not affected as in ordinary inflammation, but in a manner *sui generis*. 3. They all occurred within a fortnight of each other. 4. In one of them, with no cerebro-spinal affection, there were the ecchymosed spots over the mucous membrane of stomach, and in both the enlargement and softening of the spleen described in true cerebro-spinal meningitis. 5. They all died very soon after the first symptoms of the disease appeared, treatment having no good effect on them whatever.

If these reasons are sufficient to show a true connection between those three cases, then there must have been a common cause. Contagion is, I think, out of the question, as they all occupied different wards in the asylum. The house was over-crowded at the time, but it so happened that one of them lived in a small block of buildings detached from the main asylum, which was not over-crowded. I am not aware of anything in the diet to have caused such an endemic. The weather had been particularly raw and cold previously, and I think it must be attributed to some atmospheric influence.

I think such a little endemic, occurring as it did among persons subjected to the same influences and conditions of locality, diet, clothing, and warmth, may throw some light on the natural history of cerebro-spinal meningitis. It seems to show that this disease may occur as one symptom of a general constitutional disease, which in one case shows itself in the pleura and lungs alone, in another in the pericardium as well, and in another in the coverings of the brain and

spinal cord. It is only in such an institution that such accompaniments of an epidemic are apt to be observed. One case, or a few cases, of cerebro-spinal meningitis might have occurred in a town, and there would have been no means of discovering the pathological lesions found in all the cases of other disease that died in the town about the same period. This was, in fact, an epidemic on a small scale, where all the ill effects of the morbid influence could be observed. It seemed as though the cold, raw, spring weather of that time did not, in that locality, produce the usual catarrhs and inflammations, but instead of these a peculiar and fatal form of morbid action, affecting chiefly the coverings of the brain, spinal cord, lungs, and heart.

OCCASIONAL NOTES OF THE QUARTER.

A Social Blot.

We have satisfaction in submitting to the Medico-Psychological Association, and especially to those members of the British Medical Association who signed the following protest against the offensive article entitled "A Social Blot," which appeared in the "British Medical Journal," for 27th October, 1870, the reply of the President of the Committee of Council to the same:—

TO THE COMMITTEE OF COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

We, the undersigned members of the British Medical Association, who are engaged in the care and treatment of the insane, desire to call the attention of the Committee of Council to an article that appeared in the Journal of October 22nd, entitled "A Social Blot."

Believing that the Journal of the Association was instituted for the advancement of science, and for promoting and upholding the dignity and interests of the Medical Profession, we venture to hope that the Committee of Council will agree with us in the opinion that, in criticising the public acts and conduct of any of its members, due care should be taken that no representation or statements injurious to the reputation of any member of the profession be admitted into its pages, unless they are indisputably true, and unless the good of the profession and of the public will be served by their publication.

In the article referred to not one of these conditions is fulfilled. Extracts from the Report of the Commissioners in Lunacy are given in a mutilated form, with the evident purpose of producing an impression which, if entire, they would not warrant, and are then falsely presented as samples of what every column of the Journal might be filled with. By this means, which appears to us quite unjustifiable, the character and reputation of a considerable section of the profession, including many members of the Association, are wantonly assailed. The whole article seems, indeed, to be inspired by the sensational spirit of the worst sort of writing in the daily press, and to be entirely unsuited to the pages of the recognized organ of a scientific association.

We extract a few paragraphs which are fairly illustrative of the general style and tone of the Article :—

But rib crushing, though the favourite, seems not to be the only mode in which lunatics are hurried out of existence. It will be remembered that in the report for 1869 a patient at Northampton was boiled in his bath. The example so set has been followed no less than four times in the ensuing twelve months.

Another means by which lunatics are allowed to escape from their misery is rather less novel, being none other than suicide. No fewer than eight cases have been reported.

Now it will probably occur to any impartial person that, considering the many hundred cases in which a determined suicidal propensity exists admitted annually into our Asylums, eight deaths from suicide is not a very high proportion, especially when compared with the number which figures in the Registrar-General's return among those who have not been victims of asylum mis-management. And even assuming that all the eight cases were due to neglect and carelessness on the part of those who had charge of them, is no credit to be given to the unremitting attention and watchfulness which have prevented the others from carrying out their purpose? Those who can form any conception of the unceasing anxiety which the care of suicidal cases entails will be able to appreciate the good taste and feeling of such language as we have quoted. Again—

At Fisherton House the patients complained to the Commissioners that blisters, tartar emetic, and shower baths were used to quiet them.

We think it right to complete this paragraph as it appears in the Commissioners' Report :—

It appeared that the use of blisters and tartar emetic ordered in each case as medical treatment for the purpose of allaying maniacal excitement had not been frequent; that in every instance it had been duly recorded; that the doses of tartar emetic given each time varied from a quarter to half a grain; and that shower baths had not been employed.

The omission of the latter half of this paragraph renders comment on the spirit of the article unnecessary.

We refrain from using the only epithet which could accurately characterize the following assertion :—

We might fill all the columns of this number with details, so black is every page of this report; but more is unnecessary.

We confess our inability to comprehend the meaning of the first sentence in the following paragraph. With regard to the latter, the truth or falsehood of the assertion may be easily inferred from the "Medical Directory:"—

There are certainly some very able men among the Asylum Superintendents; but the fact arises from the accident that most medical appointments and lunatic asylums are commonly regarded as a refuge for the destitute. Necessity, rather than choice, induces a younger man to take the post of assistant medical officer.

Lastly—

Our experience of the men (attendants) who take such situations is, that they are half Herculean, half brute, almost uneducated, and without qualities or feeling above the animal appetites; often they are old soldiers, who only understand being driven, and are by habit neglectful. It is not to be wondered that they naturally conclude if a person, whether lunatic or not, is troublesome and unruly, the shortest and most certain means of controlling him is by knocking him down.

This we believe to be an extremely unjust description of attendants as a class. Their duties are most arduous, anxious, and sometimes dangerous, demanding qualities of the highest order, and it is not to be greatly wondered at, however much it may be regretted, that individuals should occasionally prove unequal to the difficult and harassing position in which they are placed. To hold the whole class up to public execration because of the sins of a few is not likely to render the service more popular, but can hardly fail to increase the difficulty which medical superintendents have in procuring well-trained and efficient attendants.

Into the question of the morality or expediency of private asylums for the insane we will not enter, but it ought not to be forgotten that the founder of the British Medical Association, the late Sir Charles Hastings—a name to be held in honour by every member—was himself the proprietor of a licensed house.

We are far from deprecating criticism, but we have a right to expect that it shall be honest and competent, and that we, as members of the British Medical Association, shall not be slandered in the Journal which is its organ.

We believe the effect of the publication of the article, which has the sensational title of "A Social Blot," in a presumably scientific Journal to be, apart from its injustice to a large body of men, in the highest degree mischievous, as tending to make the separation between the specialty and the general body of the profession still greater than it is at present, to the disadvantage of both, and as strengthening popular prejudices which are injurious to the true interests of the insane and of the medical profession.

36, Bootham, York,
April 22, 1871.

DEAR DR. MAUDSLEY,

The representation of yourself and other members of the British Medical Association respecting an article in the Journal which you and they think to reflect unjustly on those specially engaged in the

treatment of insanity, was read and considered at their last meeting held at Birmingham.

I was requested by the Committee of Council to express their regret that any article should have appeared in the Journal, which could be considered to cast a slight upon men engaged in so responsible and difficult a work as the treatment and management of the insane.

I may be allowed to inform you that the article was not written by one of the ordinary staff of the Journal, but by a gentleman himself engaged in the treatment of insanity, and having large experience in its various departments, and to remind you that in the Journal of Jan. 7th the Editor expressed grief that a wider application had been given to the article than was intended.

Believe me, dear Dr. Maudsley,

Yours very truly,

W. D. HUSBAND,

President of Council of the British Medical Association.

In the "British Medical Journal" of April 29th last, the following resolution of the Committee of Council was also published:—

That the President of the Council be requested to communicate with Dr. Maudsley, expressing the regret of the Committee of Council at the appearance of the article referred to.

It is gratifying to us to find that the Committee of Council and the Editor of the "British Medical Journal" alike disclaim the diatribe of the writer, whose article, we think, certainly does not warrant the assertion of the Committee of Council as to his large experience in the various departments of insanity. If we might be allowed to venture a guess, it would be that it is to one of those disappointed men who have failed to secure a position in scientific or practical psychology, and who hang on its skirts solicitous for "a good patient," that the Editor of the "British Medical Journal" is indebted for his recent elevation to the stool of repentance.

The "Lancet" last year employed the facile pen of a gentleman presumably of this class to write a series of ill-considered articles, directed chiefly against the value of skilled medical experience in the conduct of our public asylums and in the treatment of the insane. The writer was of opinion seemingly that in such matters it is the inspiration of ignorance that best giveth understanding. This opinion had doubtless the value of personal experience; a man never writes so well as when he writes from the heart; and so it did not seem desirable at the time to contest the writer's

opinions of the true source of knowledge. It was sufficient that he was satisfied with the fountain of his inspiration; and if the Editor of the "Lancet" was satisfied with his *employé*, though we might regret it, we felt that it was his concern, not ours.

The British Medical Association and the responsible Editor of the Journal occupy towards the profession a different position. The Journal is the recognised organ of the Association, and it is of great importance that the tone and character of its articles should not be unworthy of the members. In this instance the Council have properly disclaimed the offensive article, and we therefore, while regretting that such an article should ever have been allowed to appear in the Journal of the British Medical Association, have now only to express our satisfaction at the result.

Age and Work.

Dr. George Beard, of New York, one of the authors of the work on "Medical Electricity," which we have noticed in this number of the "Journal," has been engaged in some interesting inquiries into the age at which the best work of the world has been done. He maintains that the period of life during which man does his best and most effective work is that between the ages of 30 and 50. Basing his deductions upon facts derived from the lives of 800 statesmen, authors, men of science, and representatives of every department of human effort, he divides life into five decades of mental activity—the golden decade being between 30 and 40, the silver between 40 and 50, the brazen between 20 and 30, the iron between 50 and 60, and the tin between 60 and 70. Before 45 at least 70 per cent. of the original cerebral work of the world has been done, and before 50 more than 80 per cent. The golden moment of life, when the enthusiasm of youth is at the maximum and the experience of age tends to support and systematize effort, without manifesting a tendency to retard it, is between the ages of 38 and 39.

Dr. Beard applies these views to legislation, reform, and professional and business life. Statesmanship is intrusted too much, he thinks, to age, to the exclusion of youth, and, as a natural consequence, the science of government, which should be in advance of all sciences, is in reality behind them

all. A law requiring officials to resign office upon reaching the age of 65 would be quite as wise as the law that requires the attainment of a certain age in order to hold office. The history of civilization is a history of the triumph of young radicals over old conservatives, and if it were not for death at a certain period, if life were not limited in duration to three or four score of years, society would retrograde, owing to the antagonism and opposition of the old men. In military history the greatest generals have averaged 35 years, and in the civil war in America the North was defeated in 1861, when the generals averaged 50, and was victorious in 1865, when the leaders were all under 40. In journalism four-fifths of the reading matter of the religious, scientific, and secular press is contributed by men between 15 and 40, and to this fact the profession owes its great influence. With reference to the management of colleges and educational institutions, the policy of putting them under the control of men over 60 years of age is fatal to the true interests of a progressive nation. At 60, every College President should retire under a pension, and in every department of human effort the question of age should be asked in the same breath as that of ability and capacity. With regard to the comparative longevity of brain-workers and muscle-workers, the former live to a greater age, the average age of 500 of the greatest brain men in history being 64. With reference to the comparative achievements of the sexes, the proportion was 50 to 1 in favour of man. No woman has founded a system of philosophy or religion, achieved a great invention, or composed music. The great fields of woman's efforts in history have been polite literature and government.

Montaigne, in one of his Essays, puts the best period of life even earlier, and blames the Emperor Augustus for declaring that a judge should be thirty years old. "This Emperor," he says, "was arbiter of the whole world at nineteen, and yet would have a man to be thirty before he could decide a dispute about a gutter."

For my part, I believe our souls are adult at twenty, as much as they are ever like to be, and as capable then as ever. A soul that has not by that time given evident earnest of its force and virtue will never after come to proof. Natural parts and excellences produce what they have of vigorous and fine within that term, or never.

" Si l'épine non picque quand nai
A pene que picque jamai, *

* If the thorn pricks not when it first shoots, it hardly ever will at all.

as they say in Dauphiny. Of all the great human actions I ever heard or read of, of what sort soever, I have observed, both in former ages and our own, more performed before thirty than after; and oft times in the lives of the same men. May I not confidently instance in those of Hannibal and his great competitor Scipio? The better half of their lives they lived upon the glory they had acquired in their youth; great men after, 'tis true, in comparison of others, but by no means in comparison of themselves. As to myself, I am certain that since that age both my understanding and my constitution have rather decayed than improved, retired rather than advanced. 'Tis possible that with those who make the best use of their time, knowledge and experience may grow up and increase with their years; but the vivacity, quickness, steadiness, and other qualities more our own, of much greater importance, and much more essential, languish and decay. Sometimes the body first submits to age, sometimes the soul; and I have seen men enough who had got a weakness in their brains before either in their legs or stomach; and by how much the more it is a disease of no great pain to the affected party, and of obscure symptoms, so much the greater the danger is.

And for this reason it is that I complain of our laws; not that they keep us too long to our work, but that they set us to our work too late. Methinks, considering the frailty of life and the many natural and ordinary wrecks to which it is exposed, we should not give so large a portion of it to idleness, either in childhood or in apprenticeship to the world.

Insane in Cottages.

We extract the remarks which follow from Dr. Clouston's report of the Cumberland Asylum for the last year:—

Much has been said and written during the past year about a system of boarding out such persons in cottages, and this plan is proposed to be extended to many more of the chronic insane. Nay, some writers on the subject would seem to suggest that all the insane should be so treated. Gloomy pictures have been drawn of asylums, and deep have been the tints in which the misery of their inmates has been depicted; while on the other hand have been represented bright cottage homes of which they would be inmates, happy families of which they would be members, subjected to the softening influence of woman's presence, their lives unrestrained and natural, the healthy influence of public opinion constantly securing them proper treatment. The great and merciful change in medical opinion produced by the writings of Conolly, by which the former chains and mechanical restraints were abolished, and the old Bedlam changed into the modern asylum, it is strongly urged, was only a half-way stage in the unshackling of the

insane. Now, the prison of the asylum should follow the lash and the chains into desuetude, and the mentally affected be as free as the sane. Much of this is no doubt mere nonsense, written by doctrinaires entirely ignorant of the subject. The proposal to put an actively excited insane man, who labours under a disease of the brain, into an ordinary cottage as an inmate among a family, could only have been made by a lunatic one would suppose, but when the active symptoms of his disease have passed off, and the patient has settled down into an incurable moderately manageable state, then it is averred by many whose opinion is entitled to respect, that he could be more cheaply boarded in a cottage than in an asylum, his life would be a more useful and a happier one to himself, while the necessity of constantly enlarging asylums would be obviated. It is proposed that there should be a regular system of inspection of the houses in which such persons boarded; that the cottagers should receive full instructions and a sort of training how to manage the patients, and that when any of them became very troublesome or unmanageable he should be sent to the asylum for a short time. The Scottish Commissioners in Lunacy strongly advocate this system for some cases, and are fostering its practice in certain villages in Scotland. It has been in operation to a limited extent for two or three years, and they continue to report most favourably of the results. Certainly if the law allowed this system to be tried in England there are no two counties where it could be experimentally adopted with more hope of success than in Cumberland and Westmorland. There is an accumulating mass of chronic incurable cases here as in every asylum. Of the 250 patients who were admitted the first year, there were still left 125 at the beginning of 1870, and there are 122 now. For my own part, I should be most willing to second any feasible attempt to board out some of these if suitable custodians could be found. It seems to me that if near relatives were paid as much for taking charge of such cases as strangers, there would always be one motive more, and that surely one of the strongest of all, for looking after them well. As for the misery of the patients in asylums, it is just those few who say they are most miserable who are quite unfit to be at large. Those who are contented don't say so, those who are unhappy proclaim the fact to all comers, and make noise quite out of proportion to their number.

The Aim of Asylum Treatment.

In the same report Dr. Clouston gives the following rules, which, at his suggestion, have been added to those formerly existing for the management of the asylum:—

“1. That the General Management of the Institution shall have as its first object the recovery of the curable patients.

"2. That every patient on admission shall be most carefully examined by a medical officer, and a full account drawn out at the time of—1st, his or her mental symptoms; 2nd, his or her bodily state and symptoms, special attention being directed to the discovery of any functional or organic disorder of any of the organs of the body; 3rd, any injuries that he or she may have received.

"3. That the medical and moral treatment of the individual cases, especially of the recent and curable cases, be the first duty of the medical officers, and shall under no circumstances be made subservient to any general superintendence.

"4. That the classification of the patients shall be chiefly regulated with the view of promoting the comfort and recovery of the curable patients."

Rule 19, before referred to, is as follows:—

"19. That a *post-mortem* examination be made in the case of every patient who dies, and a minute and careful record made of the appearances found, it being competent for the Medical Officer to omit this if he should consider it dangerous for him to perform such examination, in which cases he shall state the fact in the *post-mortem* register."

These rules were approved by the Home Secretary and the Commissioners in Lunacy.

Hydrate of Chloral. *

In his last report of the Royal Glasgow Asylum, Dr. Mackintosh makes the following remarks on the hydrate of chloral:—

In my last report I alluded to the new drug chloral hydrate, and as we have since used it to a great extent here, I think it proper to state the results of our experience. It has been given principally in the form of syrup, in doses varying from ten to forty grains, rarely exceeding eighty grains in the course of twenty-four hours. In general, it induces sleep for several hours continuously, and this too, although taken for a length of time. The patients capable of giving correct answers state that its effects are most soothing and agreeable to their feelings. Some of them are very fond of it; but a common complaint among the melancholies is, that when it does not cause sleep, it slightly intoxicates them. In many instances, especially in acute mania, it has completely failed, and markedly so in cases of recurrent mania, where, however, we should add, no kind of medicine seems to abate or arrest the progress of the paroxysm. In the case of some patients, it has a tendency to relax the bowels, and never constipates them; it very seldom causes nausea or headache, and the tongue is

not found to be dry, as it is after the use of morphia and other sedatives. We must say that we have proved it to be a valuable medicine in cases of insanity and delirium tremens; no bad symptom has been caused by its administration in our practice, and it is more harmless and safe than any other hypnotic known to us.

Dr. Mackintosh appends these remarks on the medical treatment of wet patients:—

Many of the class of wet patients have derived great benefit from the exhibition of a combination of the tinctures of the muriate of iron and belladonna. In some it cured the habit in a short time. In several of the demented, however, after often trying them without the mixture, it had to be repeated again and again before the habit was checked.

In the Annual Report of the Joint Counties Asylum, at Carmarthen, Dr. Hearder thus speaks of the hydrate of chloral:—

As regards the remedial value of medicines used, the chloral hydrate certainly claims the foremost place. In the majority of cases it may be relied upon to produce sleep, and that without causing disorder of the digestive organs or other unsatisfactory results. In other cases 30 grains have been administered every three hours for several days without producing marked effects. Full particulars of the recorded observations of the action of this drug will be reported to the Therapeutical Committee of the Medico-Psychological Society. In several cases I have noticed that it has caused a state of chronic lachrymation, the features being contorted as in uncontrolled grief, and the depressing emotions rendered morbidly active. One female, suffering from chronic mania, the most violent and ungovernable patient in the house, from whose breast every touch of human sympathy or feeling had apparently disappeared years ago, became most markedly affected in this manner, and called, in agonised tones, on her “dear mother,” at the same time shedding tears copiously. The effect passed off in about an hour, and, the dose of the remedy being diminished, has not again been produced. This woman has become quiet, harmless, patient, and obedient.

Chloroform in Convulsions.

Dr. Hearder, in the same report, gives his experience of the use of chloroform in convulsions:—

For many years it has been my practice to administer chloroform in all cases of continued convulsions, with unequivocal and unvarying

success. In epilepsy, when the attacks occur at long intervals, and then appear in rapid succession, one fit as it were producing and being continuous with the next, the inhalation of chloroform, in my experience, at once interrupts the convulsions, causing, first, intermissions, and then, if the administration of the remedy be continued, entire cessation of all irregular muscular action. In the convulsive stage of general paralysis, I have obtained the same results. These results are entirely opposed to the experience of other observers. Van der Kolk writes thus:—"Epileptic attacks are usually so much promoted by chloroform, that this agent has been recommended as a means of distinguishing true from feigned epilepsy; and in the few cases in which I have tried chloroform, I found severe epileptic attacks to ensue, which deterred me from its further use."

A Persistent Delusion.

In the Report of the Royal Glasgow Asylum, for 1870, is mentioned a case in which refusal of food has lasted now for *nearly three years*, and still continues:—

It is remarkable that one of the male patients, who does not hesitate to take certain kinds of medicine readily, refuses all kind of nourishment under the delusion that it is "drugged." In consequence he has been fed thrice daily, by means of the stomach-pump, for nearly three years. He will not leave his bed, although quite able to be out of it; but, notwithstanding such confinement and artificial alimentation, his bodily condition keeps pretty good.

It would be interesting to learn the result of the experiment of obliging this patient to leave his bed, like other mortals, and of allowing him to remain entirely without food for a few days, unless he chose to take it voluntarily. If he could not be prevailed upon to take food, he might at any rate be prevailed upon to leave his bed, and perhaps if he did that he might after a time begin to take food.

A Singular Mania.

The following account of an extraordinary mania is from the *North British Mail*:—

There has just been buried at Fraserburgh a man of over threescore, who, during the last twenty or thirty years of his life, displayed such a proclivity for witnessing coffin-building and funerals as amounted

almost to a mania. Whatever engaged his energies at the moment, he was never known to miss the chance of visiting the shop of an undertaker when he knew a coffin was on hand ; and it was no unusual thing for him when not pressed with work, to sit for hours together inspecting the progress of the article. The funerals of individuals of note had especial charms for him ; and wherever in the district, for miles round, he learned that one was to take place, he was certain to be present at the churchyard to see the coffin lowered into the grave. To such an extent had his admiration for "covered" coffins worked upon his fancy that, being a poor man, he deprived himself many a day of the ordinary necessities of life to lay away a shilling to procure a "covered" coffin for himself ; and on his death-bed he directed attention to a chest in which he said he had hidden "five gold sovereigns" to pay for "a grand burial." And such he had, for the numbers attending it were so numerous that it would have been, as one in the procession remarked, "as marrow to Joseph's old bones had he been looking up" to behold it.

Joseph was clearly not an unwise man, in so far as he had made for himself a definite aim in life, and pursued it definitely ; to have done that was to have reached a considerable height of philosophy, consciously or unconsciously ; but he seems to have made the not uncommon mistake of allowing the aim to master him, instead of remaining master of it. To hold the right mean in this respect is the difficulty in the conduct of life, even to a philosopher. With the foregoing paragraph we may contrast another, cut some time ago from one of the newspapers, which shews how entirely life loses its interest to one who has not the philosophy to create for himself some definite aim—it matters not much what—and the energy to work definitely for it.

A grocer's apprentice, a fine young man, of 25, named Arsene, who loved literature neither wisely nor well, lately hung himself in his master's house, in Paris. Upon his table, amid a heap of books, was found the following letter, the orthography of which was not on a par with the style :—"I am but a grocer and shall never be anything else. I always think of that caricature representing a grocer standing on the threshold of his door, and making this reflection, 'Born to be a man and condemned to become a grocer.' He who thus judged our calling was in the right. For many years I have tried to improve my mind ; I have read, and even copied out, books which I don't understand. All this muddles my head, and I find that I become more and more stupid every day. The longer I live the worse I shall be. Now, I remember to have read somewhere that a man should apply his intelligence to be useful to humanity, and as I see I shall never be fit for anything but to weigh cheese and dried plums, I have made up my

mind to go to another world which I have heard of, and see whether there may not be a place for me there. I ask pardon of my brethren for speaking in this disparaging way of our common profession; but I defy them to point out a single instance of a grocer having ever made his way to a higher position. There are plenty of manufacturers who have become deputies and are decorated and loaded with all sorts of honours, but the like has never happened to a grocer. For these reasons I have determined to hang myself. I beg my parents to erect a simple tombstone to my memory, and to inscribe upon it these words, 'Born to be a man; died a grocer.'

Murder of an Attendant.

Those who have been lately writing sensational stories of alleged violence used by attendants to insane patients, have not, so far as we observe, made any comments on the occurrence mentioned in this paragraph:—

A shocking murder was committed on Jan. 31st, at Blakehill-house, Eccles-hill, Bradford, the residence of Joshua Armitage, senior partner in the firm of Armitage and Ibbetson, engravers, Bradford. Mr. Armitage has for some time been of unsound mind, and has been placed under the care of a private attendant named Howard, at his own house. Yesterday morning at breakfast he attacked Howard, and after a severe struggle, both being very powerful men, strangled him with a towel which he had brought from his bedroom.

Had a similar struggle taken place in an asylum, and ended by the attendant overpowering the patient, at the cost of some bruise, or of a broken rib, we fear that little indulgence would have been shewn to the attendant. He would, perhaps, have done better to have allowed himself to be strangled by the patient. Since this happened, another attendant has been murdered in an asylum by a patient.

PART II.—REVIEWS.

*Berkeley.** By J. H. BALFOUR BROWNE, Esq.

A man's meaning in life? What he is worth to us? What he is here for? These are questions which force themselves upon us in connection with a proper name. We are constantly employed in working sums in addition to find out a man's worth. We are constantly dropping questions—which are like plummets—to ascertain his depth. We are all capable of dealing with trivialities. The matters of the detail of this life few of us are incapable of understanding. Those who are thus incapable we call fools and madmen. But the question as to the significance of a man is not quite a matter of detail. Many men have very little meaning here—some, each has. The tooth on a cog-wheel is not the wheel nor the force which drives it. It is only a tooth, but without it the wheel would be useless. So it is even with little men. But a great man is something more to the machinery of this world. And the questions as to what he is? and what he is worth? are not easy of answer. Two circumstances make the answer difficult. These are the facts of attraction and repulsion. A great man is great in that he makes friends and enemies. He is great because he is not insignificant. His thought is a menstruum; it dissolves men. Other men become him. He is like a planet which collects floating ærolites. The huge stones which fall upon the earth become a part of its body. Men who fall into the great man's way of thinking become a part of his soul.

That is the phenomenon of attraction; but there is its *other*, which is also a fact. A great man is not accepted by all. He is great because of his negative quality as well as his positive quality. He creates antagonism as well as friendship. All greatness brings “a sword” upon earth.

* The works of George Berkeley, D.D., formerly Bishop of Cloyne. Including many of his Writings hitherto unpublished. With Prefaces, Annotations, his Life and Letters, and an Account of his Philosophy. By Alexander Campbell Fraser, M.A., Professor of Logic and Metaphysics in the University of Edinburgh. In four vols. Oxford: at the Clarendon Press. London: Macmillan and Co.

Even the "Lamb of Peace" did that. Now it is from the position necessitated by one of those tendencies that a man must judge of his great neighbour. Those that are not with him are against him. This makes the problem difficult, and yet its difficulty does not deter. Worshippers laud their great man—there is a sort of self-satisfaction in such praise; and detractors pluck at his garment and spit upon him—there is a sort of self-assertion in this. A man's greatness is a question which is not answered without dispute, sometimes not without blows. There is a good deal of right on each side.

There is an absolute desire in each one of us to find a great man. Our ideas of greatness differ, but we all desire to see some one nobler and better than ourselves; to behold and handle an incarnated principle which is too remote from our worldly hearts. We all like to bring our senses to bear upon questions. If we see, we believe. The presence of a king makes his subjects loyal; and so far the presence of a great man is certainly an excellent thing. An absenteeism of greatness from the world is deleterious.

Men are flattered by the existence of greatness in the flesh. They feel that the greatness of another is theirs. You see men proud because Scott was a Scotchman; and so we feel proud of *our* greatness. This is not without its meaning. There is a oneness in the race. The differences are not so great as the similarities. We all desire to have great men. But how will we have them? That is the peculiarity of genuine greatness; we can't have it as we desire. Indeed, it invariably shows itself as an influence antagonistic to our dearest wishes. The dearest wishes of the mob are generally fleshly. It was under the tyranny of Pharo, it was against the fleshpots of Egypt, that Moses protested, and said "Let us go that we may serve and worship God, and not that stupid bird." It was when men were content to purchase pardons that Luther came to say that the transaction was a cheat. Great men are outrages in the world of opinion. They are always, in a sense, protestants. They come and purge the world; and it is well. Strong in faith, pure in heart, simple in manners. But such qualities are invincible. God beats Mammon even at money getting. Believers get rich, and it becomes lucrative to believe, and thus Mammon has the best of it. This is the systole and diastole of human life.

Great men always come at the right time. There are always those who say that the need at the present of heroes is exceeding great. Every "present" has had those who thought

thus. But it seems as if the times produced the great men it required. We are very material in our own time. But to set against that fact we have the revival of German philosophy; we have the existence of such a man as Carlyle. Some facts have an enormous bulk! The existence of some men has a tremendous significance. So in the century which went before our own. There were many who thought that faith had come to an end; that the ungodly triumphed; that scepticism was rampant; that free thinking had gone to its furthest limits. And those times produced George Berkeley.

There is one quality of a great man which we have noticed, and that is his philanthropy. It need not be direct, it seldom is, but it always is excellent. All great thought tends to do good. Truth is the soul's panacea, and it is not found yet. There is a saying that "murder will out." But it is truth, absolute truth, which will out. When a man knows a truth he cannot keep it. It torments him until it is uttered. It may be uttered in acts or in words. Now this is indirect philanthropy. All great men are philanthropists in this sense. All great men have their great uses. Berkeley saw this. He saw that truth, and not prosperity, was to save a country. He saw that thought, and not money, was the constituent of wealth. He imagined that a true philosophy would save England. He was eminently practical. His philosophy was not a toy but an instrument. He regarded his system as no cobweb woven by philosophers, but as a net which was to catch and hold men's souls. He proposed to accomplish a definite end. He desired to disprove materialism, to show the fallacy of free thinking, to prove the existence of a God. Surely that would be practical philanthropy. It was an end like this that Kant hoped to attain. All great men are practical. A great man's words *are acts*, a small man's are only words. This is the very thought-kernel of Berkeley's heart. His life is an externalization of this idea.

From the time when Proclus observed that there were two kinds of philosophers—one looking upon body as a cause of mind, and the other looking upon all corporeal things as dependent upon soul or mind,* these two kinds of philosophers have existed. This question is the moot point of all time. It is associated in many minds with the great moral question of obedience to a man's higher or lower nature. It is inevitably connected with the struggle between the god and the animal, which has the heart for its arena. To some

* In Platonis Theologiam, lib. i., c. 3.

men the universe has seemed to be thought, while to others thought has commended itself as only a part of the universe. But the question as to Berkeley's intellectual position with regard to this matter must be looked at in its historical connection.

When Berkeley began to put the question to himself, as to the meaning and stuff of the universe, Locke had gone so far as to suggest that matter was the cause of mind. The question of a *cause* is the most important of all questions, and Berkeley, who had become acquainted with the efforts of Des Cartes, Malebranche, and Locke to prove the existence of this same matter, thought that the difficulty of the proof of its existence might arise from its non-existence.

To many individuals it seems that philosophers quarrel about words. To them it seems waste of time. The common people think words unreal in comparison with things; and in one sense they are. But some words are the representatives of ideas, which are the threads of the canvas of the universe, and all real things are like wools sewn into these. So it is not a struggle about nothing, but about the value of all things that philosophers engage in. Now the words that Berkeley wished to attach a definite connotation to were "existence," "reality," "externality," and "cause." To do this thoroughly would be the work of a life time, but to do it thoroughly would have been philanthropy enough for a century. So far Berkeley was right. So far he was on the way to find out, not only the reason of that prejudice about the existence of matter, but the very meaning and stuff of thought itself. But his philosophy is not thoroughly searching; it is not, in the deepest sense, analytic. He is, at his best, an experimental sensationalist and not an idealist, in the truest meaning of the word. As he answers great moral questions more by reference to utilitarian reasons than by a reference to principles, so he answers the great metaphysical questions which he had proposed by a reference to concrete experiences rather than by a reference to the very foundation principles of thought itself. He constructed a phenomenalism, or a philosophy of sensation perceptions, out of a synthesis of facts rather than by a critical analysis of opinion.

But Berkeley had in this way "changed the question," as Professor Fraser puts it; and in this there was great merit. The man who puts a question is almost as great as he who answers it. He probably had a presentiment of the truth.

And Berkeley, by thus changing the question which it was thought necessary that a satisfactory philosophy should answer, founded the new school of modern philosophy. The men who went before him are dead to us. He and many of those who came after him are alive.

The ideas of to-day have a genealogy. There are families of ideas; question and answer, affirmation and negation continue the race. A man whose influence has been negative is of use positively through those who contradict him. We find this in considering Berkeley's historical position. He raised the question as to the real meaning of the words "matter," "reality," and "causality." Owing partly to the method of his research, partly to the way in which he accounted for the "association of ideas," in explanation of his theory of the invisibility of distance, and to the way in which the question of the immediacy of our perceptions was connected with the main question of his sensationalism, his answer to the question which he raised was not complete. He proved the non-existence of matter, and he accounted for the apparent causality of the universe by the existence of spirits; he accounted for externality by the existence of the relations between what is seen and what is felt; and those relations depended upon a belief in the voluntary providential activity of God. Where he ended, Hume began. Hume carried Berkeley's principles further than Berkeley had done. He denied that mind any more than matter had free activity; he reduced association to unintelligible custom; he makes experience the foundation of all reasonings concerning the relation of cause and effect, and attempts to show that there is no discoverable foundation for the conclusions derived from this experience. Hume's thought necessitated a thorough examination of the meaning of reality and causality, and Kant undertook this critical analysis. All men seem to make up one man. The work that one begins to-day is completed by another to-morrow. The sentence that one begins is ended by another. Men seem the same being. The same soul is in them all. They enter into each other's thoughts: that is into each other's lives. The man who believes what I say has become a parasite upon me. He lives on the sap of my life as the mistletoe does on that of the oak. The modern philosophy of Germany is, as it were, the work of one man. It is complete in itself. It is a working out of a thorough idealism. It is the making explicit of the universal concrete. Kant produced a system of transcendental idealism. He was followed by Fichte and

Schelling, whose philosophy was thoroughly subjective; and by Hegel, who produced a system of absolute idealism.

These are the generations of modern idealism. And this history will enable those who desire it, to know Berkeley's position with regard to modern philosophical thought. But Berkeley occupies a position with regard to modern thought which has scarcely been noticed. Much of the thought which is in Carlyle and Emerson seems to have been either directly or indirectly received from Berkeley. The philosophy of neither is a system. In each we find the philosophy as we would books upon it in a library which is being removed from one house to another—as gold lies in the sand of a river's bed. But when we do find it, it is idealism; and idealism of the constructive kind which we find in Berkeley. Much of the reforming spirit of these men resembles the desire that Berkeley had to see simple manners, love of truth, moral excellence. The hatred of materialism is in Carlyle as it was in Berkeley. We find much in "Signs of the Times" which reminds us of passages in "Alciphron;" and "An Essay towards Preventing the Ruin of Great Britain" is curiously like "Shooting Niagara and After." One other point may be mentioned with regard to Berkeley's historical place in philosophy. Professor Fraser has pointed out that Berkeley, in so far as he believed in immediate perception, is anticipatory of the Scotch philosophy. Reid, Hamilton, and Mansel have argued for the non-representative character of the phenomena presented in sense, and it was absolutely necessary to Berkeley's theory of sense symbolism that he should deny the possibility of a double object in sense perception. To Berkeley there was only a single object, and that was the sensation. To Reid there is only a single object, and that is the thing. Professor Fraser is right in attributing immediacy to both of those perceptions. But when this is done, nothing is done. No one can say that the immediate perception of Reid in any way resembled the immediate perception of Berkeley. It would be as reasonable to assert the similarity of the views of two men, who took exactly opposite sides of an argument, because they agreed as to the definite meaning of the words "yes" and "no." The very thing that the Scotch philosophers asserted to be present in sense, Berkeley denied existence to. Is there then any resemblance between these two theories? True they both deny a medium of representative ideas; but that is all they have in common. They are both non-representative, but not in the same way. The mere denial of a medium does not

prove them to agree in any point save in that denial. And to say that they are the same theories in so far as the immediacy of the presentations are concerned, is to play with the word immediacy.

So much for Berkeley's position in regard to the philosophy of the last hundred years.

Berkeley's Philosophy.—We see things we call sun and moon, river and mountain. Many men are content with this. It is enough if the sun warms, if the moon makes beautiful, if the river makes a moving road for ships, and the mountain pours down a silver largess to the green plain. These things make a man happy. That is enough. Many men live in the senses; but there is something more than the senses, and men early began to enquire what that something was. All they saw and felt must have some meaning. What was it? How did they see and feel?

There is something behind the eye, for the eye may be open and not see. Yet what could be behind the eye but another eye, for men do not see with their ears; and what could be behind the ear but another ear, for men do not hear with their eyes. The sensations then were various, and they required to be unified. Their absolute diversity was meaningless. Unity may be explanation. This question easily found an answer. What was common to seeing and hearing was that the individual *knew* that he saw and felt. Why should not seeing and hearing, then, be different phases of knowing? Thus the philosophy of idealism commenced. But still there was that crass nature to be explained. We saw and felt *it*, men said. Men saw the river, and felt the warmth. These were facts of that crystal nature which has five sides. But nature was, in this respect, infinitely various, and therefore meaningless. Separated facts are unproductive. You must take the corn to the field or it will not grow. Mere sensations, dependent upon external facts which had no connection the one with the other, were without significance. But when facts were connected it was by mind. There could be no physical connection. If I see two men together it is my seeing them together that brings them together for me. Nay, not only the connection between things, but the things themselves must needs be dependent upon mind for their very relation to mind, and that relation is the evidence of their existence. Thus nature, which was infinitely various, seemed to be melted down into thought, and only what thought would melt down was nature. The inconceivable is not

natural. It was as if nature had been shaped in a hundred ways, and thought had been the gastric juice of the brain, which enabled it to digest and assimilate the universe. This is the history of idealism in the rough. We shape a block before we dress it.

Now Berkeley had a thought of this kind. He found men believing that there was such a thing as matter, and that mind became aware of this thing by means of representative ideas, and he regarded this belief as untrue, and in that it was untrue it was baneful. Berkeley did not then and there deny the existence of a *sensible world*, but he laid the emphasis on the "sensible," and not on the world. An emphasis will make the difference between two systems of philosophy. A spark will consume a city. He said we have senses, and we have no touchstone of the senses. We cannot tell whether they are accurate or inaccurate, but as we cannot discover their perfidy we must believe in their truth. Look at it how you like, these senses tell us nothing about this thing you call "matter." You yourself admit that it is unperceived, and you endeavour to prove its existence. You can't. Its non-existence is demonstrated. This is Berkeley's earliest attitude, and with this there was an intense feeling that all this belief in matter produced that blight, scepticism. There was an intense desire to rise through this proof of the free activity of the spirit, through this proof of the impossibility of causative matter (which revolted his feelings), to the improvement of the condition of mankind, to the proof of the existence of a Deity and the truth of Christianity. This is Berkeley's earliest aspiration. If we knew a man's aspirations we would know *him*. His acts are unreal things, in so far as his spirit is concerned, when compared with his hopes. We have already said that the way he set about this work was by changing the question. We have seen that he desired to arrive at a conclusion with regard to the meaning of that externality of which we have been speaking, and of causality as it existed in the external world, and he sought to do this by examining the phenomena of sensation. In this he was wrong. Those who had gone before him had the same problem to solve, and they began the examination with matter. Berkeley commenced his examination with experienced sensations, while the Germans sought for the basal principles in thought itself. Beginning at the wrong end or in the middle makes a great deal of difference in the end.

However, having set about an analysis of sensation, he proceeded until he found that he could not get further than sensation. There was nothing behind sensation on the material side, and the fault of Berkeley's philosophy is that there is so little on the mental side of it. He found that large and small, soft and hard, white or blue, was all that he knew of things outside of him. The material world was a world of sensations. Anything of which these phenomena were modes was an impossibility, as it was unperceived, and what is unperceived is not. True there is a certain relation between perceived sensations, but that is dependent on the mind; it is not real, except in so far as it is perceived. He fought strenuously against abstract ideas, and the belief in matter was one of them. He admitted the possibility of forming abstract ideas in his *Principles of Human Knowledge*,* but denied the possibility of forming abstract general ideas, and he did this upon the authority of experience.

So far, then, we have got only to the proof that externality is sensation. But perception implies a person perceiving as well as an object being perceived. If the sensible external world is only in sensation, and I perceive it, then it is in me, and a part of me; and yet I am conscious that it is distinct from me. I drag identity through a hundred changes. I have my own face under a million changing masks. My soul is the same in a million attitudes. I alone am permanent. The world is a chameleon; it is changing constantly. There is nothing permanent but my identity. In this way sensations differ from the percipient. They are his, and they are not his. He has *them*, but to a certain extent they have *him*. They are in me, and yet not of me. This attitude, with regard to sensations, raised the question of causality. I have a consciousness of some activity; I can will—but my will is not effective against sensations. I cannot will to see or not see. Therefore my will is not the cause of my sensations. So far the world is only actual sensation, which I perceive to be mine and not mine. But Berkeley had to deal with the unperceived qualities of objects as well as the perceived. When we shut our eyes, does the visible world go out of existence, or only exists because we remember it to have been visible, and imagine it to exist?

Phenomena change. The world is a procession, it passes us. We see days and nights, and they go. Our lives are spent in looking at the processions of events. But what I see

* Introduction, Sect. 16.

I do not handle ; what I handle I do not hear. The bell I see is not the bell that rings, and not the bell that is cold and hard to my finger. This is evident from the very statement of Berkeley's theory in so far as it relates to sensation. But there is a relation between sensations, and these relations are believed to be universal. One group of relations, which is actual, is therefore a sign of other groups which are not actual through the relation of these to time past and time to come. This is the meaning of substantiality and causality when they are attributed to the dependent phenomena of sense, according to Professor Fraser ; for Berkeley does not develop his theory into this completeness. Professor Fraser adds to a theory of a constant succession of actually perceived sensations which are dependent on, and yet independent of the mind that perceives them, the idea of a possibility of actual sensations and so arrives at a co-existence among phenomena, which, he asserts, is the only conceivable substantiality ; and at an idea of permanence and invariableness in the succession of sensations, which he regards as the only conceivable causality among phenomena. This might be satisfactory if the meaning of "co-existence" and "succession" were not to be determined in the same way that the meaning of substantiality and causality are, that is, by mind.

May it not be said with as much truth that for us the only conceivable co-existence and succession of sensations is dependent upon the interpretation of those very signs which we are using them to explain. If we cannot see distance, we cannot perceive time ; and as distance is to be inferred, according to Berkeley, from certain syllables in the visible language of the sensible world, so surely would we argue that time is to be inferred from certain syllables in the same articulation of sensations. If time or succession is upon a par, in so far as its source is concerned with the actual sensations it is supposed to explain, the explanation must necessarily be useless. If distance cannot prove substantiality, how can time ? If time rests upon what rests upon it, the equilibrium of the argument founded upon it is not likely to be stable.

But we return to Berkeley. The non-existence of the unperceived seemed to follow necessarily from his theory, and he had recourse to the supposition that imagination continued the actual existence of the unperceived objects when we thought of them as unperceived, in which case we would lose all guarantee of objectivity. If imagination is the con-

dition of existence, his philosophy would be a subjective sensationalism. The way that constructive idealists answer the question which arises in this contest, is by regarding the permanent possibilities of sensation as giving some guarantee of objectivity. It is certain that all this discrepancy has arisen from Berkeley's defective method. He was not thorough, he was not deep. He began with sensation, and he ended there. He was not earnest to find in thought the reason of all things, and to ascertain the very nature of thought itself. He never sought the deepest. He only considers, and that in a somewhat unsatisfactory way, the possibility of uncreated conditions of thought and being.* Had he bestowed more attention upon this subject the whole question of externality and causality might have been the better understood in connection with his system. And he might have come to imagine that sensation itself was, to a certain extent, external. But, as it is, the "changed question" received only a tentative answer.

If Berkeley's conception of a visual language is not the very best philosophy, it is excellent poetry. That we should "live and move and have our being" literally "in God;" that the material universe should be, as it were, the simple consciousness of God, and that we should live interpreting it as we interpret man's thoughts from his language, is a wonderful conception. Let them laugh who will. The idle are those who find fault with the laborious. The flippant may grin at such a theory; but all the grinning in the world is as nothing to the truth. It sinks in from the flesh into the spirit, and makes an ugly soul more hideous. This theory of vision is beautiful. Philosophers are poets, for all great truth is poetry. The peculiar character of the thought of the latter is that feeling makes it Protean. It changes its form. It is an eclecticism of the beautiful, an in-gathering of the lovely in the universe into the true of thought. In the truest sense this theory is a poem.

The argument for the existence of this visible language is exceedingly lucid. Berkeley says: "Distance is a line turned endwise to the eye, and a line in that position, however long, is to the eye that sees it a single point." The eye then cannot perceive distance immediately, and therefore perceives it mediately or through something else. Distance, then, is perceived through or by means of the changes of appearance which are perceived by the eye in connection with an object when it is near and when it is further off. Thus littleness,

* See *Siris*, sect., 311—318; 351—362.

faintness, or confusion are signs of distance. But they could not be signs of anything unless the individual had experience of what these things were the signs. Distance then is, according to this theory, known through experience of the visible phenomena variously situated. But words are connected with things in the same way that these signs are connected with the things signified.

An argument that a man may know distance through a perception of the angles made by the optic axis where they meet in the visible object, is disposed of by Berkeley, by an assertion that, in that case the mind would discover distance by means of geometry, and that it would be necessary under such circumstances, that a man who perceived distance from angles, must first perceive the angles, or that he could not otherwise infer anything from them. And, further, that if you asked any seeing man about these angles, he could tell you nothing about them. He then argues that a blind man made to see would not see things at a distance from him, but in his eye, or in his mind, and also that the objects of sight are not at a distance from the eye. This he proves by showing that a thing seen at a distance differs from the same thing when seen near at hand. A man at a distance may seem a post. Can we be said to have seen the man? The things, therefore, which we see are not those which we suppose to exist at a distance.

He then proceeds to show that the proper objects of sight are lights, and colours, and their shades; "and these do form a language wonderfully adapted to suggest and exhibit to us the distances, figures, situations, dimensions, and various qualities of tangible objects—not by similitude, nor yet by inference of necessary connection, but by the arbitrary imposition of Providence, just as words suggest the things signified by them."

All this is expounded with the utmost grace, and illustrated with adequate ingenuity. No one ever wrote upon metaphysics more admirably than Bishop Berkeley. But the grace seems sometimes to draw away one's attention from the weakness of the argument. The nimbleness and ingenuity of style often conceals a want of force in the logic. In this argument it is evident that there is no reason assigned why this language of the universe—of which this theory is the grammar—should appeal only to one sense; why the other senses should not in the same way be *en rapport* with Deity through their own peculiar sensations.

Again, precisely the same arguments that Berkeley produces in support of the proposition that men cannot become acquainted with distance through the acuteness or obtuseness of the angles formed by the optic axis, apply with as much force to the proposition that men must learn to swallow, or to that other, that the bees must reason as to the building of their cells.

The above analysis of his argument will show in what way he was wont to reason, and it will also indicate the process by which this wonderful poem was elaborated—this conception, which makes the whole universe a wall, dark as that which loomed over Belshazzar's feast, on which God writes his thoughts to men by means of fire.

But the main object of Berkeley's "Essay towards a Theory of Vision," was to inquire how it came to pass "that we apprehend by the ideas of sight certain other ideas, which neither resemble them, nor cause them, nor are caused by them, nor have any necessary connection with them." And the explanation, as Professor Fraser has pointed out, is a moral presumption of a divinely established association between visible and tangible phenomena.

It must become evident to all who reflect upon the subject, that much that we call perception is a reasoned belief, and that this induction is founded upon the universal association. To whatever cause that association is due, will be obvious to those who read carefully the "Essay towards a Theory of Vision." That we do not touch and see the same things in Berkeley's sense of the word is certain. The qualities which are perceived by sight are not those which are perceived by touch, and yet in the sensible world we find that tangible things are signified by visible things, and visible things are signified by tangible things, and this association is founded on a belief in the providential activity of God. In this way Berkeley comes to conclude that the construction and existence of the world of which we are cognizant by sense, is voluntary and arbitrary; and in this context he seems to deny the uncreated necessities of thought and existence, which in his later years he seemed more willing to acknowledge. But this principle of association, although Professor Fraser has clearly distinguished it from the ordinary subjective association of ideas, even explained as connected with the presupposition of faith in the present and constant rationality, which as it were, pervades things, is a defective link in Berkeley's philosophical chain. Surely the rationality of the

universe and the conception thereof, must to some extent depend upon any theory of vision which would explain seeing the distant or outward; and a belief in such a supposition cannot be made to support a theory of our perceptions. From Berkeley's own method, we have a right to expect an explanation of the objective association of sensations from his theory of vision, and not an explanation of his theory of vision founded on a belief (which is exceedingly like a prejudice) in the constant rationality of the phenomena of which we become conscious by means of sense. If B is deduced from A, it is evident A cannot be deduced from B.

But upon what does this pre-supposition rest? Thoughts are builded one upon the other. The lower explains the position of the higher. The lowest must explain all the rest. The story of the elephant and the tortoise was an effort to find out the true meaning of stability. It was crude, but it was an admission of the principle. The way it was carried out was in conformity with the known laws of human thought. As the more remote must, through the near, explain the near—and we have in this process both induction and deduction—as there is a necessary endeavour to rise through the particular to the ultimate conception, which will make all those particulars reasonable and intelligible, so it is, men often imagine that by getting into an unintelligible remoteness, they have got at an explanation of their immediate environment. So it was that the difficulties of the question of stability were removed from the world to the tortoise, and there the question was left. Now, the question of the ground of Berkeley's pre-supposition has not been sufficiently enquired into; and it seems certain that Berkeley must, in an ultimate analysis, have derived this pre-supposition from subjective association: otherwise, the faith in the interpretability of the universe could have no meaning for us, and the objective association of ideas can, in Berkeley's use of the words, have no meaning.

Berkeley's Life.—Notwithstanding these defects in Berkeley's philosophy of sensation-perceptions, or sensuous idealism, as a whole, his system is the best that Britain has produced. A philosophy is, to a man's ordinary thoughts and conceptions, what a cathedral is to an ordinary house. The building of it is worship. If Berkeley's house—not builded with hands—is less huge and massive than that of Kant or Hegel: if there are cracks where the wind of scepticism may whistle through, while their system has a gigantic completeness,

still, it is infinitely beautiful. If theirs is like St. Peter's, his is like Cologne, unfinished, yet so exquisite. All men have two lives. They live in facts, and in ideas. They become metaphysical upon occasion. They live in the dust of circumstances for six days, and on the seventh, matter has a rest, and man lives above the world. The soul has a day to itself. No man can help thinking philosophically at times. Each, now and then, transfigures nature; thinks the impossible, which turns out to be the true; sees those iron facts melt like wax, and feels the soul within him as lasting as brass. These things are so in the life of each. The poet abolishes matter. He thinks together things which the fate of their existence have separated, but which the overpowering fate of his joins. The painter looks at nature through ideas, and it yields up its hidden meaning under such a microscope. All the truth in life is the ideal. But most men indulge in this spurious idealism. They admit the thought into their lives, but it does not, as it ought to do, become their lives—absorb their lives. Sometimes lightning is flashed through a cloud; the flame is not seen, but the cloud is illumined. In every part of its bulk it shines. So it should be with the light of truth in a soul. Souls are like clouds, and the light of truth should fill them in every part; but too frequently there is only a spark, as there is in dying embers.

Berkeley's life was thoroughly interpenetrated by his philosophical thought. In his writings, we find a gradual advance from the thought of a youth who thinks for a purpose, to the thought of a man whose purpose is thinking. We find an apartness, in some of his earlier works, of his thoughts from his actual life. His practical life was separated to some extent from his ideal life. But in his later years we find that his philosophical life is his practical existence.

If his works are a poem (an epic of God), his life is a poem—an idyl of man. His life is beautiful. He does good in the little hand to hand way, as well as the great mind to mind way. We find passages in some of his letters to Tom Prior, requesting him to pay sums of money to his (Berkeley's) brothers. We know of his work at Cloyne, of his experiments with tar water, of the efforts he made to attain his great object, the grant for the University at Bermuda; and we feel that Pope, when he ascribed to Berkeley—

“Every virtue under heaven,”

was in the right.

But those who care to know the few facts of Bishop Berkeley's life, which are preserved to us, must go to Professor Fraser's admirable biography. Care is the characteristic of this biography, as it is of all Professor Fraser's works. He has not attempted to extract the essence out of Berkeley's life, and give it to us in a few words. Few men have this wonderful power, and of those who have, many make better pictures than portraits. But Professor Fraser has given us a life which is in every respect admirable, and one which is as worthy of Berkeley as it is of his biographer. Professor Fraser's prefaces to the various works of Berkeley are not less admirable than the life, and many of the notes are most valuable. This was necessarily the case.

It is a somewhat difficult task to learn to know a man. Some people might live for years with another, and never know anything about him, or only know him by sight. To get into a man's inmost thoughts, to appreciate his life in its entirety, and not in its little particular trivialities; to get through the facts to their meaning, through the acts to the soul; that is the work which a conscientious biographer and interpreter has to do.

Now one thing is certain, Professor Fraser thoroughly understands Berkeley. He appreciates, perhaps, better than any one the full meaning of Berkeley's philosophy. He enters into every part of his thought, and he endorses almost all his opinions. Only one thing can be said which derogates from this very high estimate, and, to use a Hibernianism, perhaps that does not. Professor Fraser almost knows too much of Berkeley. In some connections he sees results which Berkeley hardly contemplated, and he traces necessary consequences of Berkeley's thought, which, in some instances at least, we feel that Berkeley had not anticipated. Withal, however, Professor Fraser is most careful to interpret, and not to interpolate, and such an interpretation as that which Professor Fraser has given us is just what was required. We have pointed out Berkeley's influence upon purely philosophical thought, and upon thought at the present day, which is not purely philosophical. We need not trace the indirect influence of that thought—as it appears in the writings of Carlyle and Emerson—upon the whole of the current speculation of our time. We see traces of Carlyle in most of our great men; and so inoculation from the old stock of ideas goes on. That being so, it is surely most important that Berkeley's own works should be studied by those who have, as it were,

adopted his opinions at second hand, especially as his writings, although profoundly philosophical, are more likely to address themselves to the minds of ordinary readers, than the pseudo-philosophical writings of our two great men. In this way Professor Fraser has done well in giving to the public his valuable edition of Berkeley. There are other reasons which make the publication of this book an important matter in so far as philosophy is concerned. English constructive idealism, as represented by Mr. Mill, is not prosperous. Mr. Mill has sighed and given up the cause of ghosts or spirits. He has come to what he considers as an inexplicable fact, and founds his system of philosophy upon it. It is time to go back if we cannot go forward, and there is no one to whom it is better to go back than Berkeley. To all philosophical readers, Professor Fraser's work will be most acceptable. He has done a real service to philosophy in this country.

Subject and Object as Connected with our Double Brain, and a New Theory of Causation. By R. VERITY. London: Longmans and Co.

There are several good points in this book. The style in its clearness, felicity, and flow reminds one of that of Coleridge. The author has also a considerable intimacy with the subjects which he handles. He fully recognizes the necessity, in determining the truths pertaining to the world of mind, of profoundly studying the physiology of the brain and nervous system. On the whole he is not one-sided, but attaches equal importance to the various aspects of a many-sided question. In some respects, however, this book reminds us of a work we once read, entitled the "Exact Philosophy." We regret to have to say that there is in it too much dogmatism and rash assertion; and the author, though he covers considerable surface, does not always attain to more than ordinary depth. Yet his style and *nonchalant* manner of putting things is apt to impose on one who is not a specialist on certain of the subjects of which this book treats. "The author himself," we quote from the preface, "belongs to those who rest in truth and not in doubt." We have not the least doubt of it. It were well if the author did rest a great deal more in doubt than he does, and not present to his readers, in the garb of established truths, so many

questionable opinions. We would recommend him when he next writes a book to have the bust, say of Hume, Hamilton, and Huxley, in front of him, and to be imagining one or the other of them to be occasionally giving utterance to such exclamations as these: "That's open to doubt, do not see it at all." (Hume). "Far from original, to be found, &c., &c." (Hamilton). "Humph—only plausible; there are many obstacles to the acceptance of that notion." (Huxley.)

It is characteristic of Mr. Verity that he never once mentions a living psychologist, physiologist, metaphysician, or logician. We stand corrected to a certain extent. He does lead us to understand that he recognizes the existence of Darwin, but only to mention his theory in this depreciatory style:—"The theory of Natural Selection as the origin of species may find a place under an imperfect system of Induction, but it could not exist under the stricter test of the laws of causation." By laws of causation here are to be understood, of course, Mr. Verity's laws. How far the fact that Darwin's theory is condemned by these will contribute, among the *élite* of the scientific world, to their acceptance, or afford presumption of their truth, we leave the reader to determine.

As a remarkable instance of our author's tendency to what is no more than scientific romancing we quote a passage which is, to say the least of it, surprising. "The isolation of each hemisphere from contraction of the folds of the callosum, and consequent pressure of the subjacent parts, and the thalami may reasonably be regarded as the proximate cause of sleep." To say nothing of the hypothetical contraction of the folds of the corpus callosum, we were of opinion that sleep could be more reasonably accounted for by supposing that when from exhaustion there is a lack of energy in the system, and the blood vessels of the brain contract, the more dependent organs, which are also the more special and superior, experience the want first, being as it were at the top, where the diminution of energy must first be felt, and that in consequence of this diminution sleep ensues. But let us hasten on to consider the two leading topics which form the title of the book, "Subject and Object as connected with our Double Brain, and a New Theory of Causation." By the by, in relation to the word *new*, as here applied, it is J. S. Mill who says, "In the existing state of the cultivation of the Sciences, there would be a very strong presumption against any one who should imagine that he had effected a revolution

in the theory of the investigation of truth, or added any fundamentally *new* process to the practice of it." While deprecating the tendency of yielding more deference than is due to the authority of a great name, still we must remind Mr. Verity of the unlikelihood of that being both new and true which is in fundamental opposition to such men as J. S. Mill and Darwin. But first let us proceed to discuss the author's hypothesis in regard to the use of a double brain.

We all recognize in our knowing such a distinction as the person who knows, technically called the subject, and that which is known as existing in contrast to this, technically called the object. Then persons having only a slight acquaintance with physiology are aware that the brain is divided into two hemispheres. Now, Mr. Verity, in common with several others, imagines that one hemisphere has a function to perform different from that performed by the other; that the right hemisphere subserves the subjective and the left the objective element of thought. According to him we posit the world in the left hemisphere, and look at it with the right. But what we want to know is how one set of brain-cells can be conscious of what passes in another set.

A disintegrating action takes place in certain of the cells of the right hemisphere, and consciousness ensues. Where? There where the cell action takes place. We believe that this is an established fact, seeing that in sensation nerve fibres are proved to be not sensitive *lines*, but sensitive *points*, which is to say, that a sensation is seated exclusively at the origin of a sensitive nerve, namely, in the cells to which it is there attached. If this be true, how can consciousness, that is seated in the cells of the right hemisphere, amount to a looking at what is revealed in the left, any more than a pain which is mentally projected to the toe really resides in that member? Consciousness, we may be pretty sure, is "cabined, cribbed, confined," to the very cells from the action of which it ensues. At the same time, we are fully aware that in general sensibility—the inner field of organic extension, in touch—the middle field, and in vision—the outer field, the sensitive minima become localized from the very fact of being felt as *out* of each other; while we are equally aware that intellectual consciousness is not thus communicative as regards its habitation in space. It, therefore, affords no sanction to the probability of Mr. Verity's notion. Consequently, if in sensation physiologists have proved that we are not speculatively justified in locating pain, for instance,

in the foot, even although practically we cannot avoid doing so, *a fortiori* much less is Mr. Verity justified in assigning to the right hemisphere a consciousness of what is revealed in the left.

We have another fact to urge in opposition to our author's hypothesis—it is impossible to discriminate between consciousness and its immediate object. Take a cricket ball held in the hand. All that we feel of this ball is seated in the tactile and kindred centres. This, to all intents and purposes, is the only ball of which we are conscious. But where here is the object as distinct from the sensation? It is not to be detected. Object and sensation are merely two names for what is, *ad nos*, one and the same fact. Similarly, an ideal object is only a term synonymous with thought or notion. It is impossible to distinguish the thought of the object from the object of which we think. If Mr. Verity denies this, let him tell us what consciousness without an object is, or point out any instance in which it occurs as even most remotely discernible from its own object. For some time we have been applying the principle involved in these words of Mr. Verity: "We have Subject and Object in consciousness, and their correlates must of necessity be found in anatomy;" in other words, what are simultaneously *two* in consciousness cannot have *one* and the same seat in the brain. Now, what we deny is, that any given instance of consciousness, or what is equivalent to that, any given ideal or sensational object, is ever discovered to be two. Such being the case, it can have but *one* seat.

We do not, however, for one moment deny the existence of such a distinction as subject and object in the sense of self and not-self. But we cannot at all understand how we can be conscious of even self on one side of the cerebrum, and of not-self on the other. For let us consider the arrangement of nerve-fibres that this would necessitate. The basis of our personality we believe to consist of the first field of extension, our organism as sentient and sentient in space. Now, if it is the right hemisphere which is in relation with this field, the nerve-fibres connecting it with that hemisphere must decussate on the left side, but not on the right. What has the anatomist to say to this?

But how is subject and object as synonymous with self and not-self to be explained? The subject is an object revealed, the revelation can exist *only* in the object, and the object *ad nos* only through the revelation. Here then we have the

subject-object or self. By another act of consciousness we realise an object-object or not-self. Here again an object is revealed, and the revelation exists *only in* the object, and the object *ad nos* through the revelation. These then are the subject and object in relation to which Mr. Verity advances his very questionable hypothesis.

Let us now hasten on to consider the new theory of Causation. Our author complains that no advance has been made in the explanation of cause and effect since the days of Hume. He states, as if in correction of the prevailing idea, that no causation can proceed from unity. But who of any note in the present day dreams that it could? "What then is a cause?" We quote from a manual of logic, intended for the instruction of youth, "It is the sum of the facts or things to which another fact or thing owes its being." It is not here said that it is *the* fact or thing to which another fact or thing owes its being. According to Mr. Verity, Causation "consists simply of potential objects, more or less in number, uniting in one for the production of an effect; their act of union being the cause, the union itself the effect." He seems to hold that the effect is simply the sum of the causes, for he says, "Causes are in their effects, and effects in their causes." Let ab and cd unite, and they produce the effect $abcd$. This is how we understand the author's statements, for he continually speaks of cumulative causation, and asserts, even reducing the assertion to an axiom, that "Cause and effect are synchronous, co-equal, and co-terminous; therefore, do not stand in relation to each other as antecedent and sequent."

It rather surprises us how Mr. Verity, since he declares that the objects to be united for realising causation must be potential, and that when united their potentiality assumes a statical condition—can maintain that there is no antecedent and consequent in causation, and that the cause is equal to the effect. How about pain, is the cause of every pain equal to the effect? Then he says that the act of union is the cause. We should have thought that every one now who undertakes to write about causation would know of J. S. Mill's lucid exposure of the fallacy involved in maintaining a hierarchy of causes. To say that the act of union is *the* cause is evidently erroneous. The objects themselves, their potentialities, and what not, are all elements of the cause, as stated in the scholastic maxim, *causæ partiales in toto concursu stant pro una*. Does our author mean to declare that when five marbles are added to five more, we have an act of causation;

that the act of their uniting is the cause, their union the effect? We do not suppose that he does. But if he does not, he must allow that in the act of union a *change* takes place in the potential objects uniting together, and that this change must take place *in time*, that consequently the relation of antecedence and consequence is no fiction. Then where does growth or development proceed from, if not from this change which takes place in the uniting elements? If the author believes, as his frequent mention of cumulative causation implies, that it proceeds simply from the congregating of separate elements, as one flock of sheep joins another, we have no hesitation in affirming that the scientific world will cry "Nay."

The most advanced teaching of the present time on this subject is, as we understand, that of the Evolutionists, who, let us inform our author, are neither all Comtists nor materialists, and they hold a theory to this effect:—Certain simple elements (of diverse character, we suppose,) combine together, and, in virtue of their inherent energy, form a compound which is more complex than that which would result were the elements in no way changed by their combination with each other. Again these primary compounds unite, let us suppose, with other primary compounds to form a secondary compound; and this process goes on and on till it reaches the higher mechanism of thought, till the world by a sort of reflex agency becomes conscious of itself. Now for the information of our author, let us mention that there are many who fully detect causation in the development which occurs in nature, when objects each charged with its peculiar energy, in consequence of this energy form a compound more in advance than that which results from a mere numerical union.

In discussing some other points to be found in this book, we cannot enter into any length, so shall dismiss them with a few passing remarks.

The author seems to think that all causation is constructive. How about causation when operating in the opposite direction? When a disintegrating operation occurs is "a cause the act of *union* in *one* of potential objects for the production of an effect?"

When we enquire how our author accounts for the cognition of cause, he has nothing new to offer. He simply repeats the old *à priori* theory that causation is a rational intuition, and this after accusing Hume, of all men, of using "loose" language on this point.

Readers of Comte are aware that he divided the course of intellectual research into three stages. The two former of these he considered to be transitional, destined eventually to be absorbed in the positive or final stage. Our author maintains that the two former stages are not transitional, but permanent portions of the true scientific method, and, indeed, we cannot better describe his book, as a whole, than by calling it a medley in which theology, metaphysics, and physiology are mixed up together. He even goes so far as to point out where the organs connected with each of the three departments of the true method are located in the brain; and the names which he gives to these organs respectively are wonder, causality, and the perceptive faculties. Now without denying that there are mysteries which will always remain such, because only existing as clouds and darkness in the region of pure faith, on the confines of the human mind, confines which it cannot extend; without denying, to go one step nearer, that there are problems which can only be known in part as long as the limitations of the human mind remain as they are, problems lying partly in the region of faith, partly in that of knowledge; yet we maintain with perfect confidence that within her own domain Reason, while she recognises the absolute necessity, in the case of every truth, of a birth-stage and a growth or transition stage, yet will never rest satisfied till these are wholly absorbed in the final and mature stage. If Mr. Verity denies this, then, in common consistency, he should insist that it is necessary to the perfection of manhood that infancy and boyhood should always co-exist with it in the same person.

One word in reference to the author's supposed demolition of the Darwinian Theory. We do not for a moment imagine that Darwin denies Mr. Verity's position, but contends that among a number of "potential objects" coming together, a given medium will be favourable to the production of certain effects or certain modes of evolution, and unfavourable to others.

In conclusion, we would not say to those who are proficient in psychology, "Do not read this book;" we would advise them by all means to do so, for there are many things in it which they could ponder over with advantage; but to one who is a novice in psychological studies we have no hesitation in saying, "Don't."

W. G. D.

A Practical Treatise on the Medical and Surgical Uses of Electricity, including Localized and General Electrization. By GEORGE M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. New York: William Wood & Co., 1871. pp 698.

Electricity in its Relations to Practical Medicine. By Dr. MORITZ MEYER. Translated by WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine, in the Bellevue Hospital Medical College. New York: D. Appleton & Co., 1869. pp. 497.

The advantages to be derived from the use of electricity in the treatment of disease are now so generally admitted, that no one can be regarded as fully provided with the resources of the medical art who is not familiar with its use. From the first recorded case of paralysis by Kratzenstein, more than a century ago, down to the scientific investigations of Duchenne and Remak, it has been chiefly towards disorders of the nervous system that its therapeutic action has been directed. Much has now been accomplished in determining the circumstances in which this powerful agent may be expected to produce beneficial results, and also in guiding our selection of the mode in which it may be best applied.

At present the great difference of opinion among electrotherapeutists refers to the comparative value of the galvanic or contact, and the faradic or induction electricity. The French school, led by Duchenne, claims for the latter a position as essentially the electricity of medicine; while Remak and his German associates maintained the especial importance of the constant current, and only tardily admitted that the induction current possessed the slightest therapeutic value. As has been shown in the history of almost all similar controversies the labours and views of both parties have been of essential service. There are circumstances in which either mode may be employed with advantage; but there are more in which sometimes one and sometimes the other will be found most useful. In the two works whose names we have placed at the head of this article, the opposing views have been carefully weighed, and the conclusions presented by the authors do not differ in their general principles. Either treatise may be taken as an intelligent guide in studying the subject. The work of Moritz Meyer has, since its first appearance in 1854, gradually won its way through three editions; till in its

present form it takes rank as the approved text book of the subject in Germany. Dr. Hammond has, therefore, done good service in placing it within the reach of English readers. The treatise by Drs. Beard and Rockwell has the advantage of having been published subsequently to that of Meyer, and in some points it presents undoubted improvements. In the introductory parts, which in both works are devoted to a short statement of the general principles of electro-physics and electro-physiology, the American authors do not assume so much previous knowledge in the reader as is assumed by the German writer; and the more liberal use of woodcut illustrations renders the descriptions more easily understood by those commencing the study. More important assistance, perhaps, is given by the illustrations to the chapters on the *modus operandi*, where the various methods of applying the apparatus in the treatment of different affections is explained. On the other hand, we are inclined to doubt the advantage which the newer work derives from having attempted to discuss the general pathological relations of diseases of the nervous system. In such a treatise there is not room for a full discussion of doubtful points, and there are other and better means of learning the accepted views on the subject.

In hospitals, and other institutions specially devoted to the treatment of diseases of the nervous system, both the faradic or induced electricity, and the continuous galvanic current are in daily use. A large number of general hospitals are, however, still without proper instruments for the employment of the latter; and it is only a small number of practitioners, either in town or country, that use it in private practice. But even with the induction apparatus, there are many forms of paralysis and rheumatic affections in which much benefit may be obtained. Drs. Beard and Rockwell also insist strongly on its value as a general tonic. In cases of nervous exhaustion, or, as they prefer to call it, "neurasthenia," cases especially interesting to members of the Medico-Psychological Association, they have found it of great use. In such cases—not necessarily anæmic, nor showing symptoms of general bodily weakness, but easily fatigued by exertion, especially when mental—free from organic disease, but often sleepless and generally depressed, they have found general faradization alone prove decidedly and sometimes rapidly efficacious. Indeed, they say that "beneficial results are so uniform in this condition that we have reason to suspect some unrecognizable organic disease in those cases that give no

evidence of improvement after protracted treatment. Even the complicated forms that are the result of incurable disease, may be much relieved." They also report favourably of its use in cases of undoubted hypochondriasis. Regarding its use in actual insanity, they do not give any opinion founded on their own experience. The following paragraphs contain their remarks on this subject:—

"The very marked results that have been obtained by electrization in hypochondriasis, insomnia, and hemiplegia dependant on cerebral disease, give reason to hope that the same remedy may be useful in insanity. The incipient stages of mental disease ought certainly, in some cases, to be relieved, if not cured, either by faradization or galvanization of the head, and galvanization of the sympathetic. We believe that an important future is in store for the scientific, faithful use of this remedy in our public and private asylums. It will be observed that a number of our cases of hysteria and hypochondriasis, in which the results of treatment were most satisfactory, were really of unsound mind, and for this reason we regret not to have had opportunity to test the treatment in severer forms of insanity.

"Althaus reports good results in some cases of excessive spirit drinking from the use of galvanization of the spine, head, and cervical sympathetic. He states, that under this treatment 'the morbid desire for alcohol was rapidly checked.' Electrization would be indicated in cases of excessive addiction to alcohol, opium, or tobacco, on two grounds. In the first place, the cerebral disorder with which these conditions are associated, and of which they may sometimes, at least, be supposed to form a part, would be benefitted by galvanization of the head and of the sympathetic; and secondly, the very great debility and nervousness that result from the excessive use of these agents, and which so severely complicate all attempts to break off the evil habit, would be rationally combatted by general electrization. Althaus reports favourable results from this treatment in opium eating and excessive smoking. The symptoms of chronic alcoholism are so similar in many respects to those that are found in other nervous diseases, that they might, logically, be treated in the same way."

The application of electricity to the treatment of insanity, though it has not yet been investigated in a scientific manner, is by no means a new idea. About the commencement of the present century cases of melancholia were stated by Gentili and Palazzi to have been cured by its use; and in recent times Dr. Rorie, of the Dundee Asylum, has attributed to it the cure of hallucinations of hearing.

One of the advantages which faradization possesses over the simple galvanic current, is the safety with which it may be used, as it is almost destitute of electrolytic power—the

power to alter the chemical constitution of tissue. But the reason of its safety is also a cause of weakness as a remedy, and consequently we find that some disorders, such as neuralgia, are more frequently benefited by galvanism than faradism. Eulenberg, the most recent and one of the most trustworthy authorities on the subject, maintains the superiority of the constant current in the treatment of neuralgia. "In the cases of centrally-produced neuralgia, true cure by galvanism," he admits to be "doubtful, and at any rate rare; palliation, on the contrary, is equally striking and frequent."* The constant galvanic current must, however, be used with the greatest caution. The unfortunate experiment of Duchenne is a testimony to the power of the agent, but also a warning as to its danger. "He applied the continuous current from a voltaic pile to the face of a patient suffering from paralysis of the portio dura. The victim perceived, when the electrodes were applied, a bright flash of light, and exclaimed that the room was in a blaze. A total and permanent loss of sight was the result." A sad, but we believe unique case of serious injury effected in an attempt to obtain benefit from galvanism.

That the brain may be directly galvanised has been satisfactorily shown by the experiments of Erb, and it is probable that good results will in many cases be obtained by this mode of treatment. The electrolytic or chemical action of the constant current may be expected to modify the nutrition of the parts subjected to its influence, more perhaps than anything else which is at our command. We must wait, however, for the results of further experience before we can attempt to measure its value. Another mode of affecting the cerebral functions is by means of the peculiar influence which galvanism exerts in what Remak called its "diplegic" action.

He observed that contractions of the muscles of one or both of the upper extremities may be produced by placing the positive electrode of a galvanic apparatus in the auriculo-maxillary fossa, just anterior to the ascending ramus of the lower jaw, and the negative by the side of the sixth cervical vertebra. That he was correct in supposing that this depended on irritation of the superior ganglia of the sympathetic, was proved by the experiments of Fieber on animals, in whom the sympathetic was exposed and subjected to the

* Lehrbuch der functionellen Nervenkrankheiten auf physiologischen Basis bearbeitet von Albert Eulenberg. Berlin: Hirschwald, 1871.

action of the current. Drs. Beard and Rockwell state that they have experimented considerably on themselves and others in comparative, in order to determine the physiological effects of such applications of electricity. The applications were made with a modification of Stöhrer's battery, or with a number of Smee's elements. The number of cells used ranged between ten and twenty-five, and the length of each sitting was from two to five minutes. The effects experienced from these applications are described as follows :—

"A slight feeling of drowsiness sometimes began to be perceptible shortly after the electrodes were applied, increased up to a certain point, and increased for some little time after the *séance* was over. In many cases it is not observed until the lapse of five or ten minutes after the *séance*. The feeling, which is by no means constant, was usually so slight that it might not have been observed, had we not in our experiments kept closely on the watch for every sensation experienced during, or just after, the application.

"On the accepted theory that a state of cerebral anæmia predisposes to sleep, we should reason *à priori*, that electrization of the sympathetic ought to induce a feeling of drowsiness, since it unquestionably diminishes the current of blood in the brain; and experimentally we have found that it does thus induce a slight and temporary disposition to sleep, although this result is probably far less marked than it would be, if without injury to the living subject the application could be made directly to the ganglia. Dr. Hammond has found that galvanization of the sympathetic caused contraction of the vessels of the brain, as may be demonstrated by examining the retina with the ophthalmoscope during the application. From observations that we have made at different times, and by various methods of application, it would appear that anæmia of the retina is not a uniform or necessarily an immediate result of galvanization of the sympathetic, but that hyperæmia may sometimes be temporarily produced; and in other cases no change in the vascular condition of the retina is observed beyond a slight enlargement of the veins."

In order to determine this question, the authors made a number of observations on their own persons, with the aid of several ophthalmologists. They also investigated the effects of faradization applied in the same manner. The observations seem to show that "the effects of galvanization of the cervical sympathetic on the retina vary more or less with the strength of the current, the length of the application, and the position of the electrodes." The practical difference between galvanism and faradization seems merely to be in the greater power of the former. The subject is worthy

of thorough investigation, and may become of special importance in the treatment of insanity. We are, therefore, glad to know that some asylums are already possessed of instruments which will enable the medical officers to test the value of both forms of electrization; and we hope that before long we may have to present the results of such investigations to the readers of this Journal.

J. S.

On some Disorders of the Nervous System in Childhood; being the Lumleian Lectures delivered at the Royal College of Physicians of London, in March, 1871. By CHARLES WEST, M.D., Fellow and Senior Censor of the College, Physician to the Hospital for Sick Children. P. 134. Longmans, Green, and Co., 1871.

We shall need no apology in bringing before our readers the last Lumleian Lectures of the College of Physicians. The distinguished physician of the Hospital for Sick Children has done well in making the topic of his discourse, the diseases of children—a subject in which he is *facile princeps*.

No member of our profession conversant with medical literature would be unprepared for a luminous account of the ailments of the class among whom our author has largely passed his life. Those only who have been brought into intimate relationship with him, however, would have been fully prepared for the masterly way in which he has treated the psychological aspect of the question, and for the freshness which he has imparted to the subject.

Taking as his classification of the disorders of the nervous system peculiarities relating (1) to sensation, (2) to motion, (3) to the power of speech, (4) to the mental and moral powers, our author places before us his views in a singularly eloquent way, and imparts to his treatise an interest which is only to be attained by those vivid portraiture from real life and real disease, which distinguish the writings of an original observer from those of the mere collator of other men's opinions.

The first lecture, after a rhetorical introduction, is devoted to pain and to epileptiform convulsions. Our author points out in a forcible way the value of *pain* as a symptom in children—that it means real disease, that neuralgia, nerve pain, independent of local disease, is of extreme rarity,

and that when pain is severe, obstinate, recurrent, it signifies generally a true organic lesion. The importance of this is especially marked in pain referred to the head or to one of the lower limbs. When pain is referred to the head we shall do well to remember that *neuralgic* pain is located in some part, and is often attended by weeping. Our author agrees with Trousseau in the importance of tears as disproving real inflammatory lesion of either head or chest. He points out, too, that the pain of cerebral disease is rarely limited to one part of the head, or if it be, is referred to the forehead. Very truthfully does he describe a form of neuralgic headache, which is not unfrequently found among children who are being overworked at school, a headache which has frequent recurrence, and by reason of which returns we are enabled to give a hopeful prognosis, and assure the patient's friends that the symptoms have no grave meaning.

After reiterating the important fact, the excessive rarity of pain in childhood, except as a sign of local disease, Dr. West points out the frequency of motorial disturbances in children from sympathy with constitutional disorder. Imperfect digestion, intestinal disorder, diarrhoea, constipation, too long fasting, too full a meal, the irritation of teeth, the onset of acute inflammation, the outbreak of an eruptive fever, all may give rise to convulsive movements, often to a fit of convulsions. Very important is the statement that "convulsive movements in early life are frequently partial, but all partial convulsive movements have a great tendency to become general."

In analysing the histories of a large number of cases of defective mental development, we have been struck by the frequency of convulsive movements in early life, and every day's experience convinces us of the importance that should be attached to them. "They have" (in the words of the author) "a tendency to recur at uncertain intervals without obvious exciting cause, and then receive the name of epilepsy; they retard mental development or occasion a retrogression of powers already acquired, and this in proportion to the frequency of their return, and the causelessness of their occurrence."

In no part of these interesting lectures is there more suggestive matter than in that relating to convulsive disorders—every page bears the impress of a master's hand. Placing chorea and epilepsy in antithetical contrast, he points out that the attacks of epilepsy when they recur, do so generally with

increased severity, while the second attack of chorea is generally less severe than the first. Knowing the grave importance of early infantile convulsions—feeling as we do how they leave their imprint on the nervous system, how after years of latency they reappear as epilepsy, and make havoc of the fairest moral nature and the keenest intellect, we are anxious for any sign which may give us hope that our little patient may be spared this desolating blast, or that may forewarn us of the impending evil. Is every case of convulsions we meet with in early infancy the prelude to evils of the gravest character? Can anything guide us in our terrible prognosis to anxious parents, or in the moral and physical treatment of the little one? Is the severity of the convulsion to be our guide? Are we to attach importance to the frequency of their recurrence? Here our author steps forward and tells us what we believe to be the truest maxim—that the absence of a distinct exciting cause is to be the ground of our apprehension. A definite exciting cause being manifest, we are led to hope that that being removed, the chain of recurrence may be broken. No less valuable and true is the observation, that the frequency and not the severity of the attack is the measure of danger. Some of the worst cases of stunted mental development we have met with, and which have yielded the least satisfactory results to physical and moral treatment, have been those connected with transient attacks, which, while making no strong appeal to the emotional susceptibilities of those about them, have insidiously sapped the intellectual life of the patient, and, in the language of our author, have presented us with “a young plant stunted and deformed, not an old one withered.”

In the matter of treatment, Dr. West confirms much of our experience of the bromides, as standing in the first rank as curative agents; he does not however forget the influence of moral means—the regulated exertion of mind and body, the control of the moral feeling, the imparting self-control, and the presenting new objects of interest before the awakening life. How much the influence of Hope may effect is exemplified by the reputation which the shrine of St. Dymphna had achieved at Gheel, and how much may be gained by a well regulated moral life may be witnessed at the establishment of St. Vincent de Paul at Tain.

The second lecture treats principally of chorea, and here our author has imparted freshness to an old story. The statistics as to the relative frequency of chorea in the sexes is

confirmatory of our own and other observations, that the proclivity to this affection is on the female side. He points out that while the graver nervous ailments are more frequent among males, the ephemeral ones are the heritage of the female sex.

We are glad to find that Dr. West takes a broad view of the etiology of chorea, and does not attempt to narrow it to any such thing as—that embolism is to a great extent its cause. The clinical history of chorea, its tendency to recovery under treatment, and then to relapse, its being a disease of childhood, and especially of girlhood, has to our mind been fatal to any theory of such simplicity of origin. We are of opinion, however, that our author attributes too little importance to emotional causes in the production of chorea. Our own observations have led us to attach far greater importance to the influence of fright as a factor, and to a mobile emotional temperament as a strongly predisposing cause. It is for this reason, we believe, that females suffer more than males; it is for this reason, too, we are inclined to think that the periods of second dentition and of puberty are the eras of its greatest frequency. There can be no doubt also that defective nutrition is an important producing agent. We remember how strongly this was believed in by one of our colleagues who insisted, and certainly facts appeared to verify his statement, that the number of cases of chorea presenting themselves in the out-patient room of a large hospital was *directly* as the price of the quartern loaf. It has been a matter to us of frequent observation, that emotional children were those most prone to chorea, and it has been also no less a matter of observation that among idiots, the least emotional of our race, chorea is rarely met with. Among more than a thousand idiots, with whose life history we have been acquainted, chorea in an acute form has never been observed. The relation of chorea to rheumatism and cardiac affections is treated with great skill. We believe with him that “the heart affection of chorea is in many cases non-rheumatic,” and that “we have not yet learnt all that it were well for us to know with reference to heart affection and its relation to chorea.”

The mental change which follows in the wake of chorea is one of considerable interest. It has fallen to our lot to see many cases of great mental hebetude produced by this disease, and some requiring great faith to prognosticate a favourable issue. Our author thus alludes to the psychological aspect

of this disease. "The silliness of manner of the chorea patient is not apparent only, or due to the unavoidable distortion of the features, but it is very real, and increases with the severity of the ailment, till the state becomes one of hebetude, in which nothing is done, nor endeavoured to be done, the mind seeming to be wearied as the body is. Both, however, recover, though at uncertain rates; one child remaining dull, and listless, and foolish for weeks after movements have ceased, the other brightens as soon as the movements have begun to lessen, and long before power has returned to the limbs. It is, too, as one would expect, the emotional side of the faculties which suffers most, and the child who can repeat correctly, though not very intelligibly, long passages of poetry, will long remain fretful, impatient, passionate, prone to bursts of tears. But still, I know no instance where the mind did not at last perfectly regain its balance, and the mental faculties show themselves quite unimpaired."

In the treatment of chorea, our author rejects the treatment by strychnia, as practised by Trousseau, and which in our hands has been attended by most beneficial results, and prefers the sulphate of zinc given in increasing doses, which he regards as the only remedy having specific power. He makes no remark on the therapeutical value of arsenic, of which we entertain a high opinion. The remaining portion of the lecture is devoted to various paralytic affections of children, which we regret that the space at our disposal forbids us to notice.

Dr. West, in the last lecture, ably discusses disorders and loss of power of speech. He points out the difficulty of discovering congenital deafness in early childhood, and indicates how rarely imperfect hearing is associated with imperfect intelligence. He shows how the power of speech is sometimes lost, occasionally returning after a varying interval, or in other cases the power never being regained. Some of the cases he relates are extremely interesting, and are evidently life-like portraitures. The book closes with remarks on the mental peculiarities of childhood. The author points out how much the child lives in the *present*, how there are an exaggerated activity of the perceptive faculties and an intensity of sensibility.

"This keenness of the emotions in children displays itself in other ways, and has constantly to be borne in mind in our management of them. The child loves intensely, or

dislikes strongly; craves most earnestly for sympathy, clings most strongly to the stronger, better, higher around it, or what it fancies is so; or shrinks in often causeless or unconquerable dread from things or persons that have made on it an unpleasant impression. Reason as yet does not govern its caprices, nor the more intelligent selfishness of late years hinder their manifestation. The waywardness of the most wilful child is determined by some cause near at hand, and he who loves children, and can read their thoughts, will not in general be long in discovering their motive and seeing through their conduct."

He points out that in affections of the mind in childhood, disorder of the moral faculties is more common and more important than that of the intellectual powers.

We have thus brought before our readers some of the main points of a most interesting book, one full of original observation, and containing the results of a long and loving experience of children and their ailments. We cannot but express our obligations to the author for having taken for the subject of his eloquent Lumleian discourses the psychological disorders of the little ones for the relief of whose physical ailments he has laboured so long and so well.

J. L. H. D.

Dynamics of Nerve and Muscle.—By CHARLES BLAND RADCLIFFE, M.D., F.R.C.P. London: Macmillan & Co., 1871.

Seven years ago, or thereabouts, we reviewed at some length in this Journal a book by Dr. Radcliffe, entitled "Lectures on Epilepsy, Pain, Paralysis, and certain other Disorders of the Nervous System." The volume which he has recently brought out may properly be described as a second edition of that book. The views maintained in it are the views maintained in the former work, supported by further experiment and reflection. The propositions and the arguments are, many of them, the same. The author's unhesitating belief in the truth of his hypothesis is the same; and we may, without doing him injustice, add, that the way in which facts favourable to it are seized, welcomed, and made much of, while facts that tell against it are not made much of, is also the same. An obvious criticism must strike anyone who reads Dr. Radcliffe's book—namely, that his hypothesis,

whatever its merits, is manifestly inadequate as an explanation of *all* the phenomena of muscular contraction; that even if what he holds be true, still all has not been said, and his theory must finally be swallowed up in a wider one. An adequate theory of muscular action cannot be confined to the electrical phenomena only, but must embrace all the phenomena—must account for the disappearance of oxygen, the evolution of heat, and the waste products of decomposition that are formed during contraction, either from the muscle itself, or from the plasma supplied to it from the blood. To reduce muscular action to a physical attraction of the particles of the muscle, which has unhindered play when the “charge” of electricity by which he supposes them to be kept apart during its relaxed state is discharged, is a theory which seems at any rate to fail to account for all the facts.

The real question on which the theory hinges, however, is whether there is a discharge of electricity during muscular contraction—whether the negative variation shown by the needle of the galvanometer is owing to such a discharge. To decide this point, Dr. Radcliffe has made many experiments since the date of his former work, and he believes that in the new Quadrant Galvanometer of Sir William Thompson he has obtained an instrument which, for the first time, makes it possible to arrive at an accurate knowledge of the statical aspects of animal electricity. This instrument has, he believes, supplied proof of the existence of a definite charge of electricity in nerve and muscle during rest, and of the discharge of this charge when the state of rest is changed for a state of action. But we must content ourselves with giving a summary of Dr. Radcliffe's conclusions, without attempting to criticise them:—

1. That the sheaths of the fibres in nerve and muscle are capable of being charged like Leyden jars, and that during the state of rest they are so charged.

2. That the sheaths of the fibres in muscle are highly elastic.

3. That the fibres of muscles are elongated during the state of rest by the charge with which their sheaths are charged; the mutual attraction of the two opposite electricities, disposed Leyden-jar-wise upon the two surfaces of the sheaths, compressing the elastic substance of the sheaths, and so causing elongation of the fibre in proportion to the amount of the charge.

4. That the muscular fibres contract when the state of rest changes for that of action, because the charge which caused the state of elongation during rest is then discharged, and because this discharge leaves the fibres free to return, by virtue of their elasticity simply, from the state of elongation in which they had been previously kept by the charge.

5. That "nerve influence" antagonises the state of action in nerve and muscle by helping to keep up the natural electrical charge which antagonises action.

If it be asked why the fibres of nerves are not affected in the same way as the fibres of muscle are, according to this ingenious theory, the answer which Dr. Radcliffe gives is, "*because the sheaths of the fibres may be wanting in the requisite degree of elasticity.*" And they may not.

PART III.—PSYCHOLOGICAL RETROSPECT.

The Action of Neurotic Medicines in Insanity: being "Observations and Experiments on the Use of Opium, Bromide of Potassium, and Cannabis Indica in Insanity, especially in regard to the effects of the two latter given separately." By T. S. CLOUSTON, M.D., Superintendent of the Cumberland and Westmoreland Asylum, Carlisle. The Fothergillian Prize Essay for 1870.

("British and Foreign Medico-Chirurgical Review," October, 1870, and January, 1871.)

The following is an abstract of the above paper. It begins by saying that:—

So many cases of insanity consist of simple brain excitement, and in so many more is excitement the most distressing symptom, that if we could discover any agent which would subdue this excitement, and at the same time not interfere with the improved nutrition of the brain which rest, tonics, and good diet will effect, and on which complete recovery of its normal functions depends, such an agent would be a most incalculable blessing. There are many cases in which a physician knows that if he could tide over his patient for a few weeks of excitement, recovery would come as the natural termination of the attack. Much distrust of strong narcotics prevails among the profession since Dr. Anstie's work on "Stimulants and Narcotics" appeared. And yet how is such a case of maniacal excitement to be managed without them out of a lunatic asylum? The exact condition of the brain cells in mania being as yet quite unknown, we cannot apply a direct antidote. At best we can only work empirically. But our empiricism may be

founded on a rational and scientific examination of the effects of the drugs we use, and the natural history of the disease we treat, or it may be a mere haphazard employment of some agent recommended by some one who had no rational ground for his recommendation at all.

The observations and experiments of which this paper consist are stated to—

Consist of two parts: the first, experiments made chiefly on incurable patients in whom simple brain excitement existed; the second, clinical observations on the effects of the same medicines on recent and curable cases of excitement. The experiments were undertaken to show, first, the effects of single doses, and second, the effects of long continued courses of the medicines.

The action of the bromide of potassium in cases of maniacal excitement especially deserves careful study. It acts differently in many respects from most of the vegetable narcotics. Given along with at least one of them, it seems to intensify and prolong its effect on the nervous system, without at the same time affecting injuriously the digestion and the nutrition of the body. The investigation of this point will be one special object of this paper.

The experiments to show the effects of single doses were performed in the following way:—

I at first selected eight patients (four men and four women), all labouring under great excitement, and from two hours and a half to three hours after breakfast, after taking their pulse and temperature and noting their mental state, I gave to each of them the dose of the drug or stimulant I was experimenting with. They were then sent out in the open air, from which they had been taken in, except the day was very cold, and in that case they were kept in the house, and in an hour I again took their pulse and temperature, and noted their mental state. Their condition during the afternoon was also observed. The next day I gave another drug, and this was continued till all had been gone over, when I began again, repeating the experiment four times with most of the substances used, and twice with the others. I gave these patients in this way drachm doses of tincture of opium, drachm and two drachm doses of bromide of potassium, drachm doses of tincture of cannabis Indica ("British Pharmacopœia"), and a mixture containing one drachm of bromide of potassium and one drachm of tincture of cannabis. I performed the same experiments, only instead of the medicine giving each patient four ounces of good Scotch whisky one day, and a pint of beef tea made from a pound of good beef another. I made experiments on myself and my assistant, using smaller doses, and not repeating them so often. My objects were to ascertain accurately the effect of single doses of each medicine on, 1, the maniacal excitement; 2, the appetite; 3, the temperature; 4, the pulse, and to compare them with each other, and with the effect of a pure stimulant in large doses, and the most concentrated and nourishing of food.

Then follow tables showing the precise effect of these substances in the different experiments.

The combination of bromide of potassium and tincture of cannabis subdued the excitement in the greater number of cases, and certainly its effects were more patent and lasting than any of the others. Of the twenty-nine times in which it was given it decidedly subdued the excitement on twenty-six occasions, or in 90 per cent. of them. Opium was the next drug in potency

of effect, though it only subdued the excitement in nineteen of the twenty-nine experiments, being 66 per cent. The bromide of potassium alone allayed excitement in about one half the experiments in which it was used, but its effects were very much less decided in the extent to which it allayed the excitement. Its effects usually lasted, however, for the remainder of the day on which it was given. In one half of the experiments two drachms were given, and this dose it was which had the effect on the excitement in five of the seven experiments in which any effect was observed. The Indian hemp produced abatement of the mania in twelve out of the fifteen experiments, but in almost all these cases its effects were comparatively slight, and seldom lasted for more than three hours. The whisky was followed by marked cessation of the excitement in fourteen out of twenty-one experiments, and its effects, contrary to what might have been expected, lasted usually for seven or eight hours. The beef tea had no appreciable immediate effect on the maniacal excitement in both cases. In only one case did a patient become more free from excitement after getting it, and this was the weakest of the number.

A very striking fact is seen at a glance at the records of the observations themselves, and it is the extreme *uncertainty* of action of almost all the medicines on successive days on the same cases. One day the drachm of Tincture Opii subdued the excitement and caused no loss of appetite. Another day in the case of the same patient the same dose was followed by no such effect at all. It is this which renders any such therapeutical inquiry so apparently unsatisfactory, but which gives additional value to any drug whose effects are most free from this element of uncertainty. It shows how many things have to be taken into account, and how very many accurate observations will have to be made before anything like reliable generalisation can be attempted. We can only at present follow the *prevailing tendencies* of action of a drug.

In regard to the effect of the drugs on the appetite, opium is said to stand in "bad pre-eminence," as that which most frequently interfered with it. Bromide of potassium and its combination with cannabis Indica, on the contrary, almost never had this effect. In regard to temperature :—

The effect of opium was in the wrong direction altogether; that of the mixture of the bromide and cannabis Indica in the right direction, but perhaps going too far; and of the whisky in the right direction but going too far.

The different effect of the mixture of the bromide of potassium and the cannabis Indica from each of them given separately is worthy of notice, as it confirms my experience that in all respects this mixture acts differently from either of its constituents.

Taking all the effects of these medicines into account, I think the balance of good is decidedly on the side of the mixture of bromide of potassium and cannabis Indica. The greater certainty and longer duration of its sedative effect on the excitement, and the absence of any bad effect on the appetite, are good results which are not materially interfered with by its action on the heart.

The next part of the Essay consists of an account of the effects of those sedatives when given for long periods. Nine chronic maniacs were selected.

For a month I had these patients weighed every week, noting their weights, their morning and evening temperature, and their morning and evening

pulse. Then for twelve weeks I gave them opium in the form of tincture opii of the "British Pharmacopœia" in increasing doses, noting every week their mental state, their weight, temperature, and pulse. For the first two weeks I gave them twenty-five minims three times a day, for the next two weeks one fluid drachm three times a day, for the next eight weeks one fluid drachm and a half three times a day.

The results follow in a tabular form, and an account of them is also given. The twenty-five minim doses seem to have had no effect, the drachm doses a considerable effect for a time on all but one of the patients, but the medicine soon began to lose its effect. The ninety minim doses had a very marked effect on all the patients, but that dose, too, soon lost its effect. All the patients lost weight while taking the medicine, their average temperature fell, but not so much in the evening as in the morning, and the pulse was lowered. The general result was not favourable to opium.

The functions of the hemispheres of the brain were disordered, and this in all cases tends to impair or interfere with the healthy nutrition of the body, and opium when given continuously in the doses in which I gave it, whether as in some of the cases it seemed to allay the symptoms of the disordered cerebrum, or whether it did not do this, yet in all cases it still further interfered with the proper nutrition of the body, and pushed it one step further down hill in the direction of death.

In order to compare accurately the effects of a continuous course of a mixture of the bromide of potassium and cannabis Indica with that of opium, I discontinued the use of the latter in the cases of those seven patients, and waited till the same time of the year came round as that in which I had made the preceding observations. I then, after having observed their mental state and weighing them, put them on half-drachm doses of each thrice a day, and continued this for a fortnight, but finding that the medicine was having an effect, and showing no signs of losing that effect, I continued its use for a fortnight longer. I then increased the doses to forty-five grains of the bromide and forty-five minims of the tincture of cannabis, and continued this for a fortnight, but as this was having a very decided and continuous sedative effect I could not safely increase the doses any more, except in one or two of the cases, to whom I gave a few doses of a drachm of each, and in whom the effects were decidedly too strongly narcotic to be long continued. I then reduced the doses to a half drachm of each. I found this treatment so beneficial to the patients that I have continued it now for about eight months, with a few days' intermission occasionally in all the patients.

The results follow in a tabular form. It is shown that the medicines subdued the excitement, and showed no tendency to lose their effect in nine months, this being in marked contrast to opium. The weight of the patients was greater at the end of the nine months than it was to begin with, the appetite was not interfered with in any case, and the temperature fell, especially at night.

If we compare the general results of those two modes of treatment it is seen that the maximum of good effects and the minimum of those that are ill in their tendency were obtained by the use of the combination of half-drachm doses of bromide of potassium with thirty minim doses of the tincture of cannabis Indica.

The result of those two modes of treatment is then compared with

the effect of bromide of potassium given alone in epilepsy, as described by Dr. Clouston, in this Journal, in Oct., 1868.

It has been the result of my experience with bromide of potassium given either in epilepsy or in insanity, given alone or in combination with cannabis Indica, that there is a certain dose which may be given with perfect impunity as regards the general health, and with great benefit to the disease for long periods, and that if this dose is increased cumulative effects will show themselves, and all the symptoms of poisoning will come on. The safe and beneficial dose differs in different cases. It would seem as though the kidneys (through which the salt is principally eliminated from the system) can only carry away a certain amount in each individual. I have given twenty-five grain doses three times a day to seventeen epileptics for two years, with a break of only one week, and in only two cases did any constitutional symptoms show themselves, and that was not till the end of a year. The others are all much the better for the medicine, having gained in weight, and improved in general health. And when I put twenty-nine epileptics on the medicine in graduated doses, beginning with 15 grains per diem and ending with 150, only the twenty I have referred to stood this treatment for the thirty-eight weeks it was persevered in. At the end of eleven weeks, when they were all taking 75 grains per diem, a boy of fifteen showed signs of being "bromidized;" two men, at the end of seventeen weeks, when taking 105 grains, began to feel bad effects, and two others, at the end of eighteen weeks, with the same doses as the last, showed that the medicine was accumulating in the system. The same phenomenon we shall observe in the clinical observations which follow where the bromide was combined with Indian hemp. In some cases, drachm doses of each were given three times a day for weeks with good effects; in other cases, the same doses could not be continued for more than a few days. This I regard as one of the most important facts yet discovered in regard to the bromides. I have as yet been able to discover no fact by which we can predict beforehand that any particular case will stand large doses for a long period, or that another case will not do so with impunity. Until such a test is discovered we can only give them tentatively in gradually increasing doses in each case until we get up to the maximum of good result without any danger of the cumulative effects of the drug. My experience has been that a strong, vigorous patient, with all the functions of the body performed actively, will generally stand large doses for a longer time than a weaker patient; but to this I have seen exceptions. The salt being eliminated by the kidneys would point to giving a diuretic along with it in cases where it is considered of importance to give large doses, and yet not cause cumulative effects. Indian hemp has been much used as a diuretic. I have given some Spt. Eth. Nitrosi with each dose in such cases.

An experiment is then related in which the effects of the bromide alone was tested on "by far the most violent case of periodic mania in the asylum;" to whom was administered two drachm doses of the salt every three hours, until she got seven ounces of it:—

This experiment is instructive, as showing, 1st, that the most acute excitement can be subdued by bromide of potassium; 2nd, that this cannot be done without pushing the medicine far beyond what is safe; indeed, almost up to complete paralysis of the cerebrum and sympathetic ganglia of the heart; 3rd, that the action of the drug in such a case is strongly cumulative, increasing in intensity for days after it has been stopped, and lasting for a long time; and 4th, that no permanent improvement is necessarily produced in the morbid cerebral action. I do not regard this a case of cutting short the excitement. It was rather one of half-poisoning the patient. If any

justification of such an experiment is needed, I must plead the importance of knowing exactly the effects of the bromide on maniacal excitement, the hope that benefit might possibly accrue to the patient, and the absolute want of any precedent to guide me. It seems to me highly instructive, clinically as well as physiologically. Such a case should show the necessity for stopping the bromide at once when its bad effects are first observed, on account of this cumulative action. It illustrates the prolongation of the effects of this compared with any other drug that has the power of producing the same narcotic or paralytic action on the nervous system. It proves that maniacal excitement gives the same tolerance to the system in resisting the ordinary physiological effects of this drug as in the case of the ordinary vegetable narcotics.

The remainder of the paper is taken up with the result of clinical observations as to the effects of the bromide of potassium and its combination with cannabis Indica when given in the ordinary course of Dr. Clouston's practice.

My attention was first strongly directed to the powers of the salt in brain disorder by a case which I was treating in the beginning of 1868. I had amongst other things been giving both bromide of potassium and tincture of cannabis Indica to procure sleep in this case, which was one of melancholia, with great excitement and hallucinations, and by way of experiment I gave the patient a combination of the two. I found the effects to be so very wonderful in this case that I employed the bromide alone, and in conjunction with Indian hemp very largely thereafter in similar cases. I need scarcely say (the subject being therapeutics) that my first impression that I had discovered a panacea for some forms of brain disorder, was disappointed, but I have found very good results from this combination in very many patients.

Fifty-one cases of various forms of insanity were so treated.

They were many of them obstinate examples of their respective forms of insanity, which had "defied other modes of treatment." If to a patient whom one has known to have had regular attacks of periodic mania for years, we give a medicine at the commencement of the attack, and the patient's excitement ceases, contrary to anything known in the history of the case before, then I think we may fairly conclude that the medicine and the absence of mania are cause and effect. If in a case of mild melancholia at the change of life in a woman the disorder has existed for a year and a half, if most of the remedies ever before recommended for that class of cases had been tried and had failed to do good, and if at last the bromide of potassium procures sound sleep and immediate improvement in appetite, weight, and mental state, surely some credit may be given to it. But if in this same woman its use is intermitted, and all the symptoms at once return, and again immediate improvement follows its employment, so that the patient becomes able to employ herself as she never did before since her illness, and through healthy employment gains in flesh and strength, and gets quite as well in three months as ever she was in her life, surely we cannot deny to therapeutics a cure in the best sense of the term. Or if a cure cannot be expected, as in a case of general paralysis, if a mixture of bromide of potassium and Indian hemp so subdues intense excitement, that when not taking this medicine the patient is noisy, violent, destructive, sleepless, and rapidly losing weight, and when taking it he is quiet, semi-rational, dresses and eats properly, and remains in this state for six weeks, till the disease in its natural course passes into its quiet stage, I think here we have a palliative of great value and importance. Or if an old lady gets irrational, restless,

sleepless, and unmanageable by her relatives, and if apparently the last alternative to sending her to an asylum has been tried and failed, until half-drachm doses of bromide of potassium and tincture of Indian hemp are found to subdue and quiet this irritability and restlessness, so that she can be quite well kept at home for the month or two during which this excitement lasts, and until the ordinary dotage of old age, to which this excitement was a prelude, comes on, surely the physician's power was augmented, and the patient was unquestionably the better for the remedy he employed.

The account of a number of illustrative cases concludes the Essay, the chief points of which are thus recapitulated by Dr. Clouston:—

Summary.—1. The preceding observations consist of three parts. 1st. Experiments to determine the effect on maniacal excitement of single doses of certain medicines, stimulants, and food. 2nd. Experiments to determine the effect on maniacal excitement of prolonged courses of certain neurotic medicines. 3rd. An account of clinical observations and experience of the effects of the same medicines in all kinds of insanity.

2. To compare the effects of opium on maniacal excitement with that of bromide of potassium, with that of cannabis Indica, and with that of a mixture of bromide of potassium and cannabis Indica, and to compare the effect of these with that of a pure stimulant in large quantity, and with that of a nutritive food, eleven maniacal patients were treated with drachm doses of each of the medicines, and with four ounces of whisky, and the beef tea made from a pound of beef on successive days, and the results noted. Each experiment was repeated from fourteen to twenty-nine times.

3. A mixture of one drachm of bromide of potassium with one drachm of the tincture of cannabis Indica is more powerful to allay such excitement than any of the other drugs or stimulants tried. It is more uniform and certain in its effects, more lasting, interferes less with the appetite; and to produce the same effect the dose does not require to be increased after long-continued use.

4. Single doses of opium tended to raise the temperature and to lower the pulse; single doses of the mixture above-mentioned to lower the temperature and quicken and weaken the pulse, of bromide of potassium alone to raise the temperature and lower the pulse, of cannabis Indica alone to raise the temperature and quicken the pulse, of whisky to lower the temperature very much and slightly to quicken the pulse, and of beef tea to lower the temperature in the least degree and to lower and strengthen the pulse.

5. By giving bromide of potassium and cannabis Indica together, not only is the effect of either given separately immensely increased, but the combination has an essentially different action from either of them given alone.

6. Bromide of potassium alone can subdue the most violent maniacal excitement, but only when given in immense and dangerous quantities, and its effects are so cumulative while so given, that after they have once begun to appear they increase for days after the medicine has been stopped, almost paralysing the cerebrum and sympathetic.

7. To produce sleep in mild excitement, one drachm of the bromide of potassium is about equal to half a drachm of laudanum. To allay maniacal excitement, forty-five grains of the bromide and forty-five minims of the tincture cannabis are rather more than equivalent to a drachm of laudanum.

8. Seven cases of chronic mania were treated for twelve weeks with opium, in doses rising gradually from twenty-five minims of the tincture up to ninety minims three times a day, and the results noted. After getting no medicine for several months the same cases were treated with a mixture of bromide of potassium and cannabis Indica in gradually increasing doses, and the results noted and compared with those of the opium treatment.

9. Under the opium treatment the patients all lost in weight continuously;

their morning temperature was lowered and also their evening temperature, but the latter (which was too high, and its being high was a bad sign) very slightly, and their pulse was decreased in frequency. The opium allayed the excitement in the larger doses, but it soon lost its effect.

10. Under the bromide of potassium and cannabis Indica treatment the patients only lost in weight very slightly for the first six weeks, and after that they gained, their weight being more at the end of eight months' treatment than it was to begin with. Their appetites were not interfered with. Their temperature fell, especially their evening temperature, and the pulse was slightly increased in frequency and weakened in force, while the excitement was subdued, and the medicine showed no signs of losing its effect, even after being thus used for eight months. The maximum of good effects and the minimum of the ill effects of a sedative drug were thus obtained by using the bromide of potassium and the cannabis Indica in combination.

11. The bromide of potassium alone may be continued for months in doses of half a drachm three times a day, and the patients gain in weight and remain healthy in body, but the proper dose, whether given alone or along with cannabis Indica, varies greatly in different cases.

12. Cannabis Indica being a diuretic, and the bromide of potassium being carried off by the kidneys, it is probable that the former in that way helps to prevent the cumulative action of the latter when given alone.

13. When the two are given together, the first symptoms developed are those of the cannabis Indica, but these soon merge into a state of drowsy calmness of the nervous system which is in all respects the opposite of nervous irritability.

14. Fifty-one cases of various forms of insanity were treated by bromide of potassium alone or along with Indian hemp, and the results were that eighty per cent. of these were benefited more or less in some way, and twenty-five per cent. were most decidedly benefited.

15. The milder cases of puerperal and climacteric insanity were sometimes remarkably benefited by drachm doses of the bromide of potassium given at night.

16. In some of the cases of acute mania the excitement was subdued in a few days by the bromide combined with Indian hemp in doses of from half a drachm to a drachm of each given three times a day.

17. In some cases of periodic mania and general paralysis all the worst symptoms of maniacal excitement were allayed by giving a mixture of bromide of potassium and cannabis Indica in doses of from half a drachm to a drachm and a half of each three times a day. This was continued in one case for nine months with the best effect.

18. In three cases of periodic mania, attacks were cut short by a mixture of the two medicines, or by the bromide alone. In one of these complete recovery followed.

19. Fewer cases of simple melancholia were benefited by the bromide alone or along with Indian hemp than any other form of insanity. Some were made worse by them, but in one case of this disease where there was great excitement and hallucination of hearing and suspected organic disease of the brain, the combination gave immediate and complete relief of all the symptoms for four months.

20. One case of senile mania was successfully treated at home by a mixture of the bromide of potassium and tincture of cannabis Indica, when she was to have been sent to an asylum. It seems probable that some such cases, and also patients with short attacks of mania, might be treated by the same medicines at home, when at present they have to be sent to lunatic asylums, on account of the want of such a safe and powerful sedative.

Ergot of Rye in the Treatment of Mental Diseases. By J. CRICHTON BROWNE, M.D., Medical Director, West Riding Asylum.

("The Practitioner," June, 1871.)

During the last six years Dr. Browne has made an extensive series of experiments with ergot of rye in the treatment of the various forms of insanity, and has arrived at some remarkable results.

A remark (he says) of Brown-Séquard's imputing to this drug the power of producing contraction in the vessels of the spinal cord, suggested to me, at the time which I have stated, the possibility that it might possess a similar control over the vessels of the brain, and might thus be made to modify the functional activity of that organ. This supposition derived probability from a perusal of many scattered observations in medical literature, as to the phenomena of ergotism, and was converted into a certainty in my own mind before I had pursued my investigations very far. As these proceeded it became, indeed, a matter of surprise that a medicinal substance, long known and prominently displaying in its toxic effects a potent influence over the nervous centres, should not have been resorted to at a much earlier period, as a therapeutic agent in some of the disorders by which these centres are affected. The remarkable uterine relations of ergot, however, seem to have absorbed nearly all the attention bestowed on it. With the exception of Lallemand and Petrequin, who employed it with benefit in paraplegia, no one has thought it worthy of trial in cerebro-spinal lesions or derangement. No one certainly has tested its efficacy in those classes of cases which I am here to describe as peculiarly amenable to its benignant action. What these classes of cases are it may be as well at once to define, more especially as they do not include all those which the preliminary statement as to its physiological actions might appear to imply. My experience of ergot does not enable me to attribute to it, as yet, any advantageous action in many of those acute forms of mental disorder in which, from its alleged control over the dimensions of the intracranial vessels, it might have been presumed to be most useful. It only justifies me in asserting that it is eminently useful in certain varieties of (1st) recurrent mania, (2nd) chronic mania with lucid intervals, and (3rd) epileptic mania. In these forms of cerebral derangement I have found it almost uniformly efficacious in reducing excitement, in shortening attacks, in widening the intervals between them, occasionally in altogether preventing their recurrence, and in averting that perilous exhaustion by which excitement is so often succeeded. It can be scarcely requisite to point out that these actions which I have ascribed to ergot constitute it an invaluable instrument in asylum practice, as those conditions over which it is most influential are amongst those which have been hitherto regarded as highly intractable, and which, from the dangerous symptoms by which they are accompanied, have been unfailing sources of anxiety and harassment. Anything which will abridge the duration, or favourably modify the course of intermittent chronic or epileptic mania, must prove an inestimable boon, not only to the sufferers from these maladies, but to those who have to associate with them and wait upon them.

Dr. Browne supposes that the action of the ergot is due to a controlling power, which he believes it to possess over the dimensions of the blood vessels, and gives various reasons which appear to him to justify this opinion. The following is a case of recurrent mania, in which the beneficial effect was obvious:—

S. G—, aged 45, single, and a domestic servant, was admitted into this Asylum on February 15th, 1871. The history of her case was as follows.

She had been an inmate of the Bedford Asylum upon four occasions, but had held a situation in Rotherham without giving any indications of mental unsoundness for several years past. For some weeks previous to the commencement of her present illness, subsequent to some quarrels with her fellow servants, she had complained of pain in her head and giddiness, but had remained rational until the evening of the 9th of February, when she grew talkative, restless, and incoherent. Great violence of conduct and muscular and mental agitation were developed on the 10th, and on the 11th reached such a pitch that mechanical restraint was deemed necessary. She had become steadily worse until brought to this asylum. On examination she was found to be in a state of mania, talking incessantly in a rambling and discursive style, but capable of answering questions, and of recalling, in a confused way, both recent and remote events, when her attention was urgently solicited. She described numerous hallucinations—visions of Prince Albert of dazzling brightness, messages from her mother, whispered through the pillow into her right ear, sulphurous odours, and pins and needles in the forearms and back. She was much flushed. Her ears were of a bright red colour, her pupils contracted and sluggish in their movements, and her eyelids twitched spasmodically. The pulse was 120, and the tongue coated with a thick white fur. During the night of the 15th she was very noisy and altogether sleepless, and on the morning of the 16th was in precisely the same state, mental and bodily, as on the previous day. The liquid extract of ergot was ordered: 3ss. to be taken three times a-day. After the second dose of this, the restlessness and garrulity began to abate. The night of the 16th was passed in quiet sleep, and on the 18th convalescence was complete. The medicine was continued for a week, and then omitted. S. G— continued in a rational and healthy state until the 10th of March, when maniacal symptoms suddenly supervened in the early morning, and went on increasing in severity throughout the day. In the evening ergot was again administered, as also on the following morning, after a night of stormy excitement. The third dose was followed by mitigation, and the fourth by restoration to tranquillity and a reasonable state of mind. S. G— has remained well up to the present time.

Where the paroxysms of recurrent mania have assumed a periodical character, the influence of treatment can of course be tested with greater accuracy. It has been alleged that no treatment is efficacious under such circumstances, and that medicine cannot break through a maniacal habit of this kind once finally formed. The allegation is now, however, no longer tenable, as ergot possesses in a conspicuous degree the power of interrupting such periodicity, and abridging those attacks of mental aberration which recur at regular intervals. M. W—, female, aged 48, married, was admitted here for the third time on March 5th, 1853, and was so wildly and intractably vicious that she was placed in an article of dress then fashionable in asylums, and euphemistically termed “sleeves.” Since that date up to the present time, she has remained an inmate of the asylum, and has suffered from two attacks of insanity annually—one beginning in January and the other in July—and each succeeded by an interval of clear and rational understanding. The maniacal attacks were of the most fierce description, so that she was regarded as one of the most formidable patients in the asylum. When affected by them, she spent the greater part of the night in singing in a shrill voice, and in beating on the door of her room, and the day in obscene and disjointed conversation, in cunningly devised mischief, or in furious assaults upon those around her. Up till 1867, these attacks, which were introduced by a few days of quiet despondency, lasted for about three months each, and set all treatment at defiance. In January of that year, however, at the beginning of the winter attack, tincture of ergot was administered in doses of 3ij. three times a day, and was continued for one month, at the end of which time it abruptly cut short the excitement, much to the gratification

and astonishment of those who had watched previous outbreaks, and contended with them for three months together. And not only was the attack abbreviated, but its character was altered. After the first week, no violence was manifested, excitement being chiefly displayed by vigorous singing and headlong knitting. Since then every attack but one has punctually announced itself at each of the stated times, and has been curtailed and modified in the same way. No attack has exceeded six weeks in duration, and two have continued only for a fortnight. All of them have been of a milder type, and all of them have been treated with tincture of ergot.

After mentioning a case of chronic mania, in which the ergot had acted beneficially in subduing excitement, Dr. Browne points out that it is in epileptic mania that ergot has been found pre-eminently valuable in allaying and abolishing excitement, and in conducing to a healthier tone of mental action. In these outbursts of violent agitation which precede or follow a fit or group of fits, which occasionally take their place, and which are of a dangerous character, it exerts a prompt and energetic effect. He supposes that these outbursts are dependent upon a want of equilibrium in the intracranial circulation, primarily disturbed by the epileptic seizure or condition. The distension of the vessels, which succeeds their spasmodic contraction and produces coma, subsides, he thinks, so far as to allow the resumption of activity by the higher centres, but only in an irregular and distorted way. And he infers that the soothing and rectifying effects of ergot are due to its power of re-establishing that disturbed equilibrium.

E. S—, aged 35, a labourer, married, was admitted on the 13th November, 1869. He had suffered from epilepsy from his fifteenth year, and had latterly become so violent before and after the fits, that it was not thought safe for him to be any longer at liberty. In the first year of his residence in the asylum he had repeated paroxysms of maniacal excitement, generally introduced by a fit of uncommon severity, preceded in its turn by lancinating pains in the brow. The aggressiveness and recklessness of conduct displayed in these paroxysms, coupled with the great muscular strength of E. S—, rendered him a most formidable patient to have to deal with. Bromide of potassium, iodide of potassium, and belladonna having controlled the excitement in no degree, ergot was administered on the 10th of November, 1870, during the progress of an *émeute* of the usual kind, in which with a wild, bewildered stare, a flushed face, throbbing carotids, and dry lips, he staggered about his room or tossed on his bed, spluttering out threats and imprecations. The excitement, which had subsisted for three days, was instantly overcome by the ergot. On November 11th, his pulse was quiet, his head cool, and his manner calm and collected. He was anxious to go to work. On November 16th bromide of potassium was substituted for the ergot. On November 30th he again became much excited after a severe fit. Congestion of the head and face and combative propensities were again noted, as well as a pulse of 100, full and bounding, and a temperature in the axilla of $98\frac{3}{4}^{\circ}$. The liquid extract of ergot in 3j. doses was ordered every four hours, and the next day improvement was again recorded, marked by abatement of excitement and of the facial congestion, and a fall in the pulse to 90. In one day more no excitement remained. Since then a dose of ergot, 3j., has been taken regularly twice a day, and has prevented all maniacal paroxysms. E. S— has been uniformly well behaved, and has had severe fits without any surrounding mental perturbation. In November his weight was 159 lbs. It is now 168 lbs.

M. H—, aged 23, single, admitted March 13th, 1869, has been epileptic for many years, and is excited from time to time. When excited, she rushes about, kicking everything that comes in her way, and attempting suicide by tearing at her throat. For some months after her admission these attacks of excitement, which recurred irregularly, always lasted for a week. In July, 1869, tincture of ergot in 3j. doses was tried in one of them, and cut it short

in the most satisfactory way in twelve hours. Since then it has been repeatedly employed under similar circumstances, and always with beneficial results. Not only does it interrupt the excitement, but it lessens its tendency to return, and mitigates its intensity. No attempts at suicide have been made for twelve months past, and during that time no increase of mental deterioration has taken place.

M. H—, aged 21, married, was sent to the West Riding Asylum on 19th December, 1870, because she had become liable to attacks of furious and ungovernable excitement, in consequence of epileptic fits which had affected her for seven years, and become much aggravated after her marriage, three years ago. A sister died of epilepsy. She had recently attempted to murder her husband and cut her own throat, and was when admitted covered with bruises sustained in her struggles and conflicts. She was pale and anæmic, with dilated pupils, a feeble pulse, a stolid sluggish countenance, slow slumbering manner, and obvious defects of attention, memory, and intellect generally. Fits happened daily, and bromide of potassium was taken regularly. On the morning of January 2nd, 1871, after immunity from fits for two days, sudden excitement supervened. She rose out of bed and began to quarrel with and assault her companions, throw about the furniture, and shriek out. She could not be made to understand anything that was said to her. The face was flushed, her pulse 120. 3ij. of tincture of ergot was ordered to be taken three times a day. The first dose seemed to diminish the excitement; the second produced a deep sleep, in which the pulse fell to 90; and the third restored her to perfect composure. In two subsequent attacks of excitement the ergot has also acted well. The patient has improved so much in her general health and in mental power, that her friends are now pressing for her discharge.

E. G—, aged 23, married, was admitted on November 23rd, 1870, having been epileptic from her fourteenth year, and having become notably worse after each of her three confinements. Since the last of these, which took place in 1867, she has been subject to occasional maniacal paroxysms, always consecutive upon a series of quickly successive fits occurring during the night. When admitted, she had the expression and bearing of an habitual epileptic; drawled out slow childish answers when questioned, and was anæmic and emaciated. Treatment consisted in large doses of bromide of potassium. On Nov. 28th, an attack of excitement came on, after several fits in the night. She wandered about, disarranged the furniture, and gave utterance to inarticulate cries. Ergot was given instead of the bromide: 3ss. of the liquid extract being administered three times a day. Speedy quiescence was thus obtained. In twelve hours no trace of excitement remained, nor did any recurrence of it take place until January 28th, 1871, when it again yielded at once to the same remedy. Whenever the excitement ceases, the bromide of potassium is administered: when any premonition of its return appears, the ergot. The patient is certainly clearer in intellect than when admitted, while the fits from which she suffers have diminished in number.

A very large number of cases could be quoted, did space permit, to illustrate the usefulness of ergot in lunatic asylum practice. Those given above, however, selected not because they are most conclusive, but simply because they were most easy of reference, are sufficient to indicate that it has been found exceedingly beneficial in recurrent mania, in chronic mania with lucid intervals, and in epileptic mania, and that its actions on such disorders merit further investigation. Several gentlemen who have been members of the medical staff here, and have watched the ergot treatment of these diseases, have felt so convinced of its efficacy that they have introduced it into other asylums, with which they are now connected, and I believe with marked success.

It can be scarcely requisite to point out that as ergot becomes damaged by

age or exposure, it is of great importance to ascertain that that used is in a sound condition, in order that advantage may be secured from its employment. A judicious regulation of the doses administered is also imperative, in order that the desired effects may be obtained. These require to be very large. From 3j. to 3ij. of the pharmacopeal tincture, from 3ss. to 3j. of the liquid extract, and from gr. v. to gr. x. of ergotine, may be administered without apprehension. No evil effects have been observed here to follow from such doses, even when long continued. Patients have occasionally complained of headache, indistinctness of vision, and formication, and anæsthesia of the hands and feet, but no more serious consequences have ever occurred. Indeed, so little have injurious effects of any kind followed even the prolonged exhibition of what might be termed enormous doses of ergot, that doubts might have arisen as to whether it were possible to produce that train of symptoms described as ergotism, by means of the medicinal preparations of *secale cornutum*. In a great majority of cases, however, the beneficial effects of this remedy, here described, will be secured by its employment for a time so short, that no anxiety as to ulterior consequences could by any possibility arise.

Insanity and Hospitals for the Insane in Ireland.

Recently a very important Act—namely, 34 Vict. ch. 22, has been passed having reference to “Commissions of Lunacy,” &c., in Ireland, and called “The Lunacy Regulation (Ireland) Act.”

It is intituled “an Act to amend the law in Ireland relating to Commissions of Lunacy, and the proceeding under the same, and the Management of the Estates of Lunatics, and to provide for the Visiting and the Protection of the Property of Lunatics in Ireland, and for other purposes.”

The Act bears the date of the 25th May, 1871, and contains so many as 118 sections.

The introducer of the Bill upon which this Act has been founded, is Lord O'Hagan, the Lord Chancellor of Ireland, who holds so high a place in his profession, and who has evidently bestowed much labour in the framing of this exhaustive legislative measure, one, however, which passed through its several stages in both Lords and Commons with scarcely the semblance of any debate, and with great despatch accordingly.

Its provisions make a completely organic change in Ireland in regard to both public and private establishments for the Insane, and render the signing of certificates on the part of medical men a matter of still greater hesitation and risk than at present is the case, although the present law has been felt to err on the side of stringency so decidedly as to have prevented such men as the late Sir Henry Marsh, during the latter years of his life, and others of equal eminence since, from signing certificates in Lunacy, owing to the vexatious suits at law and other expensive and annoying responsibilities attaching to such certificates.

Now let it be kept vividly in mind that while every medical man signing a certificate in respect of Insanity is liable to be called upon at any period subsequent to his giving a certificate, to stand over the same, and in case of its correctness being questioned, to pay heavily for what may, in nine cases out of ten, have been but an error of judgment, no penal consequences attach to the opposite side of conduct—that of leaving an insane patient, however dangerous, to go at large. Surely it is the interest of the State to protect the public from the serious risks arising from palpably dangerously insane parties being allowed the unrestrained use of liberty which they are incapable of turning to proper account. We go further than this, and say that it is an obligation of the most imperative kind, devolving upon the constituted authorities, by timely interference in the case of incipient mental disease, even when not apparently presenting dangerous phases, to take immediate steps to preserve the reason, if possible, of the person affected, so as to prevent the loss of his industrial and other capacities to the general community. But this is completely nullified when the members of the Medical Profession are forced by the strongest of all motives—that of self-interest and preservation—to decline their assistance in the accomplishment of this most desirable end.

Another salient feature in this Act is the extremely laboured and comprehensive character of the returns required to be furnished by every medical man signing a certificate, and, as if these returns were not sufficiently tantalizing in their excess of minuteness, winding up with these overtaking words—"together with all such further particulars and circumstances as shall be directed by the Lord Chancellor, instructed as aforesaid by any general order."

We had supposed that the obnoxious penal portion of this Act in regard to the making of the returns as above referred to had been expunged through the instrumentality of Sir D. Corrigan, M.D., Bart., M.P., from the Bill upon which it has been founded, but we are surprised to find that such is not the case, inasmuch as section 8 enacts that "any person who, under this Act, is required to transmit to the Registrar in Lunacy any such return or notice as aforesaid, and within the period aforesaid, and who shall neglect to transmit to the Registrar such return or notice within the said period, shall be liable for every such offence to forfeit a sum not exceeding ten pounds."

The Act requires that the Medical Superintendents of the District Hospitals for the Insane, and the Proprietors of Private Establishments, shall make a return to the Registrar in Lunacy of the property, if any, of every case received under their care. To the proprietors of private houses for the Insane, a return of this kind will be an exceedingly difficult, if not invidious duty, and as regards medical superintendents, we cannot conceive why any such duty should be imposed upon them, it being unlikely that in the case of inmates under their care any monetary return would be at all necessary.

It must be admitted that there is one excellent provision in this Act

—that of doing away with the necessity of having a jury in certain cases of inquiry; but it would seem, according to the wording of section 15, on this head, that it will be necessary for the Lord Chancellor to have a private and personal interview with the alleged insane patient before this provision can be carried out. To us it would appear sufficient to have a matter of this kind settled, as we believe it is in the sister country, by the personal inspection of a commissioner appointed for that special purpose, instead of requiring the Lord Chancellor, whose time must be so fully occupied with important public duties, to determine the question of jury or no jury.

We have not space now to enter more fully into the provisions of this important new legislative measure, which has only so very recently been printed, but may do so at another time. For the present it must suffice for us to observe that the working of so comprehensive a measure, with such numerous details, must require an extensive machinery in addition to what already exists, and this will entail a corresponding expense upon the parties concerned. Whether the plan proposed of taxing the properties under the management of the Court of Chancery will be sufficient to meet this increased expense without drawing on the national Exchequer, is a question which cannot now be disposed of; but it is only right to say that the principle on which this taxation is to be levied, appears fair and just.

*Annual Report of the Richmond District Hospital for the Insane
for the Year 1870.*

The above report drawn up in its usual able and exhaustive manner, by Dr. Lalor, the experienced Resident Medical Superintendent, is particularly interesting and important on the present occasion, containing as it does a matter of the greatest moment, not only to medical superintendents themselves, but also to the profession generally, as will be seen by what follows.

We have already in our necessarily short notice of Lord O'Hagan's "Lunacy Regulation Act, 1871," directed attention to its provisions being still of a very exacting character towards medical men, who, in discharge of their professional duties, may be called upon to sign certificates in cases of insanity, and who, in doing so, place themselves in such imminent peril of being involved in the meshes of the law.

Here, in Dr. Lalor's case, is an example of a public officer, in the discharge of a public duty, dragged into a Court of Law and subjected to all the annoyances and vexations of an expensive legal suit; which may well cause alarm to our profession, and make them doubly cautious, in the present state of the law, in being mixed up with insane matters.

"The serious pecuniary loss," says Dr. Lalor, "inflicted on the tax-

payers of the district by the verdict in the case of Crook *versus* Lalor, at the close of the year, has directed public attention largely to the defective state of the law in Ireland as regards the admission and detention of lunatics in asylums, and it is to be hoped that a legislative remedy will be provided as soon as possible.

"I consider it of great importance that the existing defects of the law should be generally and clearly understood, especially by the Boards of Governors and other authorities connected with public asylums in Ireland, and I know of no means more likely to promote this result, than the publication, with this Report, of a letter received by me from Mr. Bewley, one of the counsel for the defence in the above case. With this view, I supply the following copy of Mr. Bewley's letter:—

"20 Lower Pembroke-street,

"January 14th, 1871.

"MY DEAR DR. LALOR,

"As the result of the recent action against you in the Queen's Bench may lead to a number of other actions of a similar nature, I wish to point out to you, for your own protection and guidance, the present unsatisfactory state of the law in Ireland in reference to the custody of lunatics.

"At common law—that is, by the unwritten law of the land—no person is justified in confining a lunatic unless his insanity is of such a character as to render him *dangerous* either to himself or others. No matter how beneficial restraint may be for the lunatic's own mental or bodily health, any person who detains him against his will has no legal justification for his conduct, and will be liable to be sued in an action of false imprisonment. It follows from this that the superintendents of public lunatic asylums, and the proprietors of private lunatic asylums, will not be justified in receiving or detaining any persons who are not dangerous lunatics, unless some justification is given to them by the statute law.

"In England they have complete protection, if they comply with the requirements of the Lunacy Acts. Under the provisions of the 8th and 9th Vic., cap. 100, sec. 99, the proprietors and superintendents of a licensed house or registered hospital, and every person authorised to receive a lunatic upon an order, may, on having the necessary order and certificates, take and detain a lunatic, and in actions against them for taking or confining a person as a lunatic, the party complained of may plead such order and certificates in justification of such taking or confinement. In other words, if any question is raised as to the sanity of any person confined in a public or private asylum, it is not incumbent on the superintendent or proprietor to establish that the person was a dangerous lunatic at the time of his detention. It is sufficient for him to show that the necessary order and certificates were obtained prior to the admission of the lunatic, and, even if it should appear that the patient was perfectly sane at the time of his admission to the asylum, the order and certificates will furnish a complete answer to any action against the superintendent or proprietor, if the latter has acted with *bona fides*.

"Again, the 8th and 9th Vic., cap. 126, which makes provision for the treatment of pauper lunatics in England, provides, by its 48th section, that the overseers and relieving officers of any parish or union who shall have knowledge that any person chargeable to the parish is deemed to be a lunatic, shall proceed to obtain the order and certificates prescribed by that section, and if it is certified that such person is a lunatic, idiot, or insane person, or a person of unsound mind, a justice shall, by an order, direct such person to be received into the county asylum, and such lunatic *shall be received and confined therein*.

"By the 9th and 10th Vic., cap., 84, it is provided that pauper lunatics are not to be confined unless there is a medical certificate that the lunatic is a proper person to be confined; but these Acts authorize the confining of lunatics that are not dangerous, and the order and certificate are a complete protection to the superintendent of the county asylum.

"The law in Ireland in reference to the foregoing matters is on a very different footing. Although it is necessary that before the admission of a patient into a public or private lunatic asylum, the certificate and order required by the Irish Lunacy Acts should be procured, these orders and certificates afford no protection whatever to the superintendent of the public asylum, or the proprietor of the private asylum. In any action at law, or proceeding by *habeas corpus*, the superintendent or proprietor must justify the detention of the lunatic according to the course of the common law, that is, he must prove that the patient was a *dangerous* lunatic at the time of his admission to the asylum, and during his detention there. No degree of imbecility or unsoundness of mind will warrant the detention of a patient if he be not a dangerous lunatic, or a dangerous idiot; and the law on this subject appears to me to be precisely the same whether the patient be a pauper lunatic detained in a district asylum, or a private patient in a private asylum. There is no provision in the Irish Lunacy Acts corresponding with the 99th section of the 8th and 9th Vic., cap. 100, nor do the Acts relating to the treatment of the lunatic poor in Ireland justify the detention of pauper lunatics who are not dangerous.

"I wish to put these matters clearly before you, because some persons appear to be under the erroneous impression that the recent verdict against you was caused by the absence of a second medical certificate on the admission of Crook into the Richmond Asylum. It is, no doubt, true that the 49th section of the 5th and 6th Vic., cap. 123, renders it necessary that a certificate should be given by two medical men prior to the admission into any district asylum of a patient whose support is partially paid for, but the want of the certificate by a second medical practitioner was really wholly immaterial in the action against you. The Chief Justice very properly told the jury that the sole question for their consideration was whether Crook was a dangerous lunatic at the time he was in the asylum, and that if he were not in fact dangerous, *twenty* medical certificates would afford no legal justification for his confinement.

"As the absence of the certificate by a second medical man would, in such cases, render you liable to be indicted for a misdemeanour in not complying with the requirements of the Act of Parliament, of course you should not admit any *paying* patients for the future without the double certificate. However, as to all the inmates of your asylum, except those who are detained by order of the Lord Lieutenant, you must be always prepared to show that they are dangerous lunatics in case any question is raised as to the legality of their detention. As to criminal lunatics, the order of the Lord Lieutenant will give you sufficient protection.

"I need hardly tell you that this state of the law in Ireland is most unsatisfactory, and that every exertion should be made by those who are interested in the care and treatment of lunatics to procure an assimilation of the law here to that in England, so far, at least, as the matters I have referred to are concerned.

"It is hardly unreasonable to ask that the superintendents of public asylums, and the proprietors of private asylums in Ireland, should have the same protection that persons in a similar position in England have enjoyed for the last twenty-five years.

"Hoping that these observations may be of some use to you,

"I remain,

"Yours faithfully,

(Signed),

"EDWARD J. BEWLEY."

"The defective state of the law, as pointed out in the above letter, appears to have been perceived so long back as the year 1859, as a Bill was then introduced, and passed through some of its stages in the House of Commons, which, in a great measure, assimilated the law in Ireland, as regards the admission and detention of lunatics, to the English statutes on this subject. This Bill also improved the Irish statutes regarding lunatics in other respects, and its general principles appear to me to have possessed many merits. It was, as amended, approved of by a committee containing leading members of the two great political parties of the state. As must be, in all human measures, it was not perfectly suited even to the circumstances of the time when it was proposed, and the altered circumstances or increased knowledge of the present day would require to be taken into account in legislating now as regards lunatic asylums. But, in some of its important principles, and in the fact that this Bill has received the sanction of both of the great parties of the state, it offers great advantages as a basis, at least, for legislation.

"If, however, there should be any difficulty in carrying at present a general legislative measure which would improve and codify the numerous existing statutes regarding lunatics in Ireland, it is to be hoped, at least, that there will be no unavoidable delay in applying a legislative remedy to the very great and practically injurious defects in the law, as regards the admission and detention of lunatics, set forth in Mr. Bewley's letter."

We could have wished to quote largely from Dr. Lalor's practical report, but we are now only able to give, in addition to the above, the following excerpta:—

The number of inmates at the close of the year on the books was 986, (436 males, 550 females); the admissions during the year were 425 (216 males, 209 females); the discharges as recovered, improved, &c., were 211 (104 males, 107 females); the deaths amounted to 125 (71 males, 54 females); the causes of death were abnormal affections, 29 (15 males, 14 females); cerebral and cerebro-spinal affections, 30 (15 males, 13 females); thoracic affections, 39 (21 males, 18 females); disease of heart and arteries, 5 (3 males, 2 females); debility and old age, 13 (9 males, 4 females); fever and other diseases, 8 (5 males, 3 females); suicide by strangulation, 1 (male). The daily average number of patients was 950, at an average cost per head per annum of £26 0s. 3d.

Education appears to be carried on to a large extent in this institution. The salary of the Resident Medical Superintendent with the anxious charge of nearly 1000 inmates is, we are astonished to see, but £550 per annum!

PART IV.—NOTES AND NEWS.

LUNACY REGULATION AMENDMENT.—A BILL INTITULED AN ACT FOR AMENDING THE LUNACY REGULATION ACTS.

This is a Bill which, promoted by the Lord Chancellor, has already passed through its stages in the House of Lords. It will be observed that it gives the Lord Chancellor power to appoint a guardian of the person and property of a person of weak mind for a period of six months, and that it reduces the number of visits to Chancery lunatics in private houses by the visitors to two a year.

Whereas it is expedient to amend the Lunacy Regulation Acts :

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

1. This Act may be cited for all purposes as "The Amendment Act (Lunacy Regulation), 1871."

2. This Act shall be construed as one with the Lunacy Regulation Acts, 1853 and 1862, and unless there is something in the subject matter or context repugnant to such construction, the expression "the Lord Chancellor intrusted as aforesaid," and all other expressions having a special or defined meaning in the last-mentioned Acts, or either of them, shall have the same meaning in this Act.

3. The expression "person of weak mind," as used in this Act, shall be construed to mean any person whose mental capacity is so affected by sickness or any other temporary cause as to render him incapable of managing himself or his affairs.

4. Where, on a petition presented in a summary manner, it is established to the satisfaction of the Lord Chancellor intrusted as aforesaid that any person is of weak mind, the Lord Chancellor intrusted as aforesaid may, in a summary way, and without directing any inquiry under a Commission of lunacy, by an order to be made in the matter of such person of weak mind, appoint a guardian of the person and property of the person or property of such person of weak mind, and may invest the guardian so appointed with such powers over the person or property of such person of weak mind, and generally may make such orders as he may consider expedient for the purpose of rendering the property of such person or the income thereof available for his maintenance or benefit, or for carrying on his trade or business, or for the support, maintenance, or education of his family.

Provision may be made in any order under this section for all costs incidental to or consequential on the making of such order, and for the purpose of carrying into effect the provisions of this section, the Lord Chancellor intrusted as aforesaid shall have all the powers conferred by the thirteenth section of the said Lunacy Regulation Act, 1862 ; and the Lord Chancellor may likewise for the like purpose from time to time exercise all or any of the powers of making general orders vested in him by the Lunacy Regulation Acts, 1853 and 1862.

Provided as follows :—

- (1.) Personal notice of the application for any order under this section shall be served on the person alleged to be of weak mind, and the hearing of the case of such person, and all proceedings in relation to or consequent on any order made shall be in private :
- (2.) No order made under this section shall be of any force beyond the period of six months from the date thereof, nor shall any such order be renewed more than once :

- (3.) Every such order shall contain a direction to the visitors to visit such person of weak mind at such times and in such manner as to the Lord Chancellor intrusted as aforesaid may seem fit and necessary, and to report on the case of such person at such times as the Lord Chancellor intrusted as aforesaid may direct :
 - (4.) No sale shall be made of any real property of such person of weak mind, in pursuance of the powers of this section, nor shall any lease be granted of such property, in pursuance of the same powers, except agricultural leases, for a period not exceeding twenty-one years :
 - (5.) Every guardian appointed under this section shall once at the least in every month file in such manner as may be directed by any special or general order of the Lord Chancellor an account of his receipts and expenditure as such guardian during the preceding month, and of the mode in which such receipts have been derived and expenditure incurred, together with a statement of the balance (if any) of funds remaining in his hands at the date of such account :
 - (6.) Every such guardian shall pay over any balance found to be due from him on any account in the same manner as if he had been regularly appointed a receiver in a matter of lunacy or in such other manner as the Lord Chancellor may by special or general order direct.
5. Whereas by section twenty of the Lunacy Regulation Act, 1862, it is enacted that "every lunatic shall be personally visited and seen by one of the said visitors four times at least in every year, and such visits shall be so regulated as that the interval between successive visits to any such lunatic shall in no case exceed four months : Provided always, that lunatics who are resident in licensed houses, asylums, or registered hospitals shall not necessarily be visited by any of the said visitors more than once in the year, unless the Lord Chancellor intrusted as aforesaid shall otherwise direct ;" and it is expedient that such visits should be permitted to be made at longer intervals than are required by the said enactment : Be it enacted, that the said section shall be construed as if the word "twice" had been inserted therein instead of the words "four times," and as if the words "eight months" had been inserted therein instead of the words "four months."

QUARTERLY MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION AT MANCHESTER.

A quarterly meeting, for scientific discussion, of this Association was held in the Board-room of the Royal Infirmary at Manchester, on Thursday morning, April 27th. Dr. Hitchman presided, and there were present—Dr. Lockhart Robertson, Dr. Sutherland, Dr. Henson, Dr. Batty Tuke, Dr. Deas, Dr. Eastwood, Professor Inglis, Dr. Braddon, Dr. Noble, Dr. W. Roberts, Dr. Eason Wilkinson, Mr. G. Southam, Mr. E. Lund, Mr. Aldridge, Mr. S. Bradley, Mr. Thompson, and Mr. Mellor.

The CHAIRMAN, in opening the proceedings, expressed his regret at the absence of the President (Dr. Boyd), and of the President elect (Dr. Maudsley), and then called on the Secretary (Dr. Batty Tuke) to read the minutes of previous meetings, which were approved.

PATHOLOGICAL SPECIMENS.

Dr. BATTY TUKE exhibited the calvarium of an insane patient who had been under his care. Jane M., æt. 36, transferred from a private asylum 9th August, 1866. No history; deeply demented, with occasional paroxysms of excitement and restlessness. Bodily health, fair; suffers from amenorrhœa. Three months after admission became persistently maniacal. In January she was much exhausted, and debilitated from the excitement, refusing food and requiring artificial feeding. Six months after admission she was attacked by a large carbuncle on the right hip, which was treated in the usual manner—she lay comatose for a fortnight before death, and died on 28th February, apparently from maniacal excitement and carbuncle.

No symptoms during life manifested themselves bearing on the *post mortem* appearances.

Autopsy, 60 hours after death. Dura mater very much thickened. Arachnoid thick, opaque, and of greenish colour, strongly adherent. Vessels of Pia Mater deeply injected. Over whole surface of brain a thick layer of matter, resembling pus, was found, which on microscopic examination was found to consist of aggregated molecules and granules. On opening membranes a considerable gush of a greenish fluid took place. On denuding convolutions, the grey matter of right hemisphere was found of a greenish-grey colour, much softened, in places, pultaceous. Convolution of left hemisphere natural in colour, membranes strongly adherent, anteriorly. In right temporal fossa a deposit of matter similar to that in superior surface was found, and the corresponding portion of nerve substance far advanced in grey softening. On removal of brain the surface of both the occipital and temporal fossæ were discovered lined with a thin recent apoplectic clot, thicker on left than right side. Arteries atheromatous; in left middle carotid an organized clot. On section the grey matter of right side was seen of a greenish hue, more particularly the external layers. White matter soft. Floors of both lateral ventricles covered with broken down pultaceous brain matter, of creamy consistence, which, under microscope, showed aggregated molecules and granules; choroid plexus pale and very cystic. Pineal gland very large. Cerebellum slightly congested. Other organs healthy.

Portions of the brain were prepared in chromic acid, cut and set up in Canada balsam. The outer layers of grey matter of convolutions were found much disorganized; nerve matter being in shreds, and between the fibres aggregated molecules and granules were found. The deeper layers were permeated with a green homogeneous matter, which, in some places, extended as deep as the white matter, in which large spaces of miliary sclerosis were seen. The capillary vessels were tortuous and varicose, and the perivascular canals distended. Very much the same appearances presented themselves in the corpora striata and optic thalami. Cerebellum healthy. In pons varolii and medulla large spots of miliary sclerosis. The calvarium was macerated in water for three months, when it was seen to be extraordinarily thin, in some places riddled—the inner table over right hemisphere was destroyed, sulci obliterated; over portions of the left parietal and occipital bones a fine frosted growth of new bone was formed, consisting of spiculæ about the one-eighth of an inch long. The calvarium after drying weighed 4 oz. 7 drchms.

Dr. NOBLE remarked that this was a most remarkable case, more especially from the absence of head symptoms. It was wonderful that no more definite symptoms had been noticed. It reminded him of a converse case, in which all the pathognomonic signs of inflammation of the brain existed, and on *post mortem* examination nothing whatever was discovered; the brain had the ordinary healthy appearance. He was anxious to know whether no headache had been complained of. He was aware that it was not uncommon for mutilation of the nerve substance to take place without pain, but when the membranes were involved, it was invariably present. In rheumatism of the dura mater pain was always a suggestive symptom.

Mr. THOMPSON asked whether in Dr. Tuke's case any softening of the bones in other parts of the body had been noticed.

Dr. DEAS remarked that the frosted appearance much resembled the medullary sarcoma of bone. Was there any history of cancer or syphilis?

Dr. BATTY TUKE replied that he could explain the total absence of symptoms by, first, the impaired condition of the nervous system of the patient; reflex action was originally interfered with before the special disease set in; those present well knew how many serious diseases occurred amongst the insane without any physical symptoms. Secondly, he thought that the extent of the mischief was such as to reduce still further the power of exhibiting pathognomonic phenomena. He proposed forwarding to the Journal a more detailed account of the case, with remarks. His attention had not been drawn to the other bones of the body, and the history of the case was so imperfect that he could not speak as to syphilis or cancer. When the patient came to him she was imbecile, both mentally and bodily.

Dr. ROGERS said some of the specimens he had intended to bring had been exhibited at Edinburgh, and an analysis had been made. In one case a man had died, nothing having been noticed to be wrong with him, but after death it was found that several ribs had been broken, the condition of the ribs being the same as in mollities ossium. Since then he had had another case of a man, of 6 ft. 3 in., who was sent to bed in the infirmary of the asylum to keep him from doing harm

to himself, and they then found that he had sustained an injury of this kind, and that he had broken the second rib. Dr. Ormerod reported a case, which was quoted in the *Journal of Mental Science*. In this case there was only a thin lamina of bone of the thickness of a playing card, and all the interior of the bone was soft. It seemed a very good example of the manner in which these injuries had occurred, at first without notice, and on the bone being taken out they found only a "kink" both in relation to the centre and the outward lamina of bone. The two bones he now exhibited were analysed by Dr. Brown, of the Liverpool School of Medicine, and in them were found a great deficiency of earthy matter, and too great an amount of organic matter. He regretted that he had omitted to bring the other bones, as well as the analysis to which he had before referred, as without this the case could not be of much use. It was no doubt a case of mollities ossium.

Dr. L. ROBERTSON said that was a very interesting paper by Dr. Ormerod.

Dr. ROGERS replied that if he had published his own paper it would have shown the other side.

Dr. L. ROBERTSON stated that Dr. Ormerod was still working on the subject, and would be glad to receive specimens of these bones.

Dr. BATTY TUKE read a letter from Dr. Howden, of Montrose, accompanying a series of diagrams of the brain. Dr. Howden expressed his opinion that it was of the utmost importance to notice the exact seat of every lesion, and that this could be done much more readily by means of diagrams than by any written descriptions. The diagrams were electrotype copies of Professor Turner's illustrations of his paper on "The Convolutions of the Human Cerebrum," which he had kindly supplied to Dr. Howden. The idea was to map out in these accurate diagrams in colour the regions affected—they consisted of (1) a vertex view of brain; (2) a profile view; (3) a view of the orbital lobule and the Island of Reil; (4) a view of the inner surface and tentorial surface of the hemisphere. It was intimated that these cuts could be provided at a very small cost.

Dr. TUKE strongly urged on the meeting the propriety of adopting these diagrams. They were the suggestions of a practical man, and would do much to promote exactitude of description. He thought that they might be multiplied, so as to show the base of the brain, and sections through the cerebellum and lateral ventricles.

The meeting acknowledged the value of the suggestion.

Mr. S. M. BRADLEY showed the brain and a specimen of a bone from an idiot. Microscopically, the brain was healthy, with the exception that the cortical cells appeared fewer in number than is usual in healthy brains. The sp. gr. was 1,030. The entire encephalon weighed 34 ounces. On the right side the collateral sulcus was absent; on the left it was well marked. All the annectant convolutions were present. The chief abnormality was met with in the cerebellum—the right hemisphere being only half the size and half the weight of the left. During life the man from whom the specimen was taken never walked, but sat crouched upon a form, swaying himself backwards and forwards from morn till night. His bones were so soft that he frequently broke them against the edge of the bed. After death, nine important fractures were noted, which were all united by bone. On examination after death, it was found that all the bones were exceedingly brittle, and the appearance of their fractured ends very remarkable. The whole strength seemed to reside in the outer shell, the interior of the bone presenting the appearance of a wide open lace work, something like the femur of an ostrich on transverse section. Beneath the microscope many oil globules presented themselves, and the Haversian canals appeared much enlarged.

Mr. MOULD took the opportunity of exhibiting a specimen which could, in his opinion, be hardly regarded as morbid, or coming under the head of Pathology. Still, it might be of service. It was a new species of floor cloth, called Boulínokon, manufactured by Messrs. Goodal and Co., King-street, Manchester. It was prepared entirely from animal tissues, hair, wool, &c., was impervious to moisture, and in consequence of the materials employed, was warm to the feet—in this an improvement on Linoleum or Kamptulicon. Its price was 4s. per square yard. It had been tried in the London and North Western Hotel, and was found to serve its purpose.

The CHAIRMAN asked Mr. Mould to favour the meeting with a paper he had prepared on "The Cottage Additions to the Cheadle Asylum."

Mr. MOULD, before reading his paper, said he had no experience in boarding out pauper patients, and must leave others to speak as to its success. At Cheadle all the patients paid something towards their board, and in the villa residences as much

as £500 or £600 a year, and this for the use of only two rooms, so that the committee made a profit of £2000 to £3000 a year. This profit was quietly applied in the reduction of the charges made by the friends of patients originally of a good social position, as those who paid the higher rates, but who had come down in the world. The committee were exceedingly liberal, and allowed him to distribute this money as he thought best for the general management of the asylum. Mr. Mould then proceeded to read his paper.

A short discussion followed.

Dr. LOCKHART ROBERTSON said they were much indebted to Mr. Mould, and the Association, for this valuable paper. It was owing to Baron Mundy's efforts to secure family life for the insane that its value had been recognised and more or less carried out in practice. The experiment of Dr. Bucknill, at Exeter, was, perhaps, the first instance of pauper patients being placed out to board in the village. He had never before heard of so complete a system as that described by Mr. Mould; and if it could be carried out in the neighbourhood of London it would be a great advantage. With regard to the boarding out of pauper patients Mr. Mould said he had had no experience, but he rather expressed a doubt whether it could be done for the same expense as was now incurred in asylums. He (Dr. Robertson) had recently seen in Scotland, at Kennoway, Fifeshire, an attempt of this kind. It was an old spinning village, and, of course, to anybody accustomed to the south it did appear a little rough and bare. The people were engaged in hand-loom weaving, which trade was failing. The houses were larger than in most other places, having been used for carrying on that work. There were also three or four acres of land allotted to each house. They could hardly hope to find such favourable circumstances in England. The Scotch Commissioner had been in the habit of boarding out demented patients from the Edinburgh workhouse at this village. He had visited about thirty of these patients, and had noticed their condition as to boarding, clothing, and bedding. Their condition was very favourable, but it certainly did not come up to the state of luxury and comfort in English asylums, nor of that provided in those of Scotland. The bedding was the same as that of the people with whom they lived. The clothing was provided by the parish, and there was no cause of complaint. As far as he could make out, the patients preferred the boarding out to the comforts of the poorhouse from which they had come. One of them was employed as a messenger, and another looked after a cow. It was sufficient to say that it was a Scotch copy of the village of Gheel. The reduction of expenditure on this system would be a great recommendation, as the ratepayers of counties were now so heavily taxed for the maintenance of pauper patients, which, after all, was not the greatest and most important work in the land. They should try to keep down the rates, which were rising year by year; and this might be done along with reasonable care for the patients. The average cost at Kennoway was 5s. to 6s. per week, and the parish clothing (as all who were familiar with the subject would be aware) would not exceed 6d. per week. The average cost in Scotch Asylums was £24 per annum. If a larger number could be boarded out for the lower sum it would be a great saving to the community. Dr. Tuke had remarked that there was a great want of washing. The Scotch peasantry did not wash, nor the English either, as a general rule. Such a thing as a bath would not be found in many villages; and these patients were as well off, in this respect, as the peasants about them. In England, especially in rural districts, it would be difficult to provide these houses of accommodation, and the landlords increased the difficulty by refusing to sell land on which they could be built. He (Dr. Robertson) had tried the boarding-out plan in Sussex, but they could not induce cottagers to take patients under 8s. per week, and when to this was added the cost of clothing and washing, the expense came pretty nearly to what it was before. A point noticed in Mr. Mould's paper was the sending of half-cured patients home to their friends. In visiting private asylums cases were often observed of patients who could be as well managed by respectable friends at home as by the authorities of the asylum. When this was the case the friends ought to do it, and should be ashamed of their neglect. But this did not apply to the poor; they had no homes suitable. With regard to inspection, it was very well when general practitioners were less qualified than they are now to deal with the insane. But now, as a body, they were quite as capable of looking after such patients as the managers of asylums. If arrangements could be made to send out patients to their friends, or to board them out elsewhere, it would be very easy to make a report from time to time of their condition to the proper authorities. The whole question would have to be dealt with before long, and the

system of building and furnishing large asylums, supported by compulsory rates, was doomed. Who that visited such asylums could fail to be struck with the number of poor objects to whom the assiduity and kindness of the most skilful physicians could do no good, and yet each of these patients costs the county as much to keep as a working man and his family!

Professor INGLIS had inspected the condition of the patients at Kennaway, where they were quite as well off as the inmates of the house. The pauper patients were not so comfortable as those who were sent out to board with their friends.

Dr. TUKE remarked that the plan which Mr. Mould had described had been in operation in Scotland for some time, at Morningside, Aberdeen, and at Montrose, where the villa or cottage residences were in connection with the original asylum. As to what Dr. Robertson had said with reference to Baron Mundy's labours for the improvement of the treatment of lunatics in England, he (Dr. Tuke) considered that a part of the credit of this improvement was due to the Scotch Commissioners. Dr. A. Mitchell by his arguments and good solid hard work had done a great deal to advance this. He quite agreed with Dr. Robertson that there were too many people in asylums, and that the system at present in force must come to an end. In working the plan in Scotland he had tried to find out those patients who had friends, and who were able to take the patients, and do for them as well as the asylum authorities could. If the friends refused to take them at his wish, he could at the close of the year refuse to renew the annual certificate which was the detaining instrument. Most of the objections which the Scotch Superintendents had made to the Scotch boarding out system had arisen from its friends advocating it to the detriment of the character of the asylum treatment. If they had been content to say the system was good enough for such people these objections would not have arisen, but when it was said it was better, that set the asylum man's back up. Kennoway, which he knew very well, had some good points and some very bad points. These last had been noticed by Dr. Robertson. He could not understand why a patient could not be kept as clean out of the asylum as in it. If his shirts and sheets were kept clean, his body might also be kept clean by the use of a common tub on Saturday night, and if this were attended to they would be more reconciled to the boarding-out system. It would be found a great relief from the overcrowding of asylums, and must sooner or later be brought into use.

Dr. EASTWOOD was sure they must all feel obliged to Mr. Mould for the experience he had given as to the work carried out at Cheadle in connection with a private asylum. The separation of patients into small numbers was carried out in all private asylums; the cottage system, or home system of treatment, was carried out more or less; and every private house, if it were large enough to allow the patients to be separated, became the cottage system. In other cases, where the house was not large enough to admit of this separation, the patients might live together with the head of the family, and thus enjoy home life. It had been his constant endeavour to secure this home life in his own experience; but it could not be carried out in a large house. Then in private asylums many patients were allowed a great deal of liberty. He found advantage in four or five patients going out together, unattended; they walked about the lanes in the neighbourhood, or over the farm, and came home to dinner, and were in fact more like boarders than anything else. So far as this could be carried out with private patients, it secured them greater comfort than they could enjoy at home, where they would be subject to greater restrictions. He thought the Chairman could give some valuable results of his experience in private asylums, with which he was formerly connected.

The CHAIRMAN said he had been much pleased with Mr. Mould's paper. He thought no objection could be made to these separate dwellings near the Central Asylum, and under the supervision of some one not pecuniarily interested in the condition of the patients. His dread of the cottage system was that its managers were thus pecuniarily interested in the condition of the patients. They would be only demented and chronic cases; and he was afraid they would not deal very gently with such cases. There was less danger of the attendants losing temper with violent and excitable patients than when they had day by day to clean after these unhappy chronic patients. He quite agreed with Dr. Lockhart Robertson that asylums were becoming over-crowded, and that it was desirable to provide smaller homes and means of separation. He was struck with the great advantage of being able to remove a patient from other patients, and a separate dwelling for this purpose near the Asylum was a great advantage. A large amount of freedom was given to the patient; and when an asylum was not large, where there were only 12 to 15

patients, they had home life as good as in a cottage home in connection with a large asylum. It was desirable to secure this individual life; and, in the management of the insane, to give them an opportunity of contact with the central authority. It would, however, be very desirable, in his opinion, to place patients with their friends when the friends were willing to receive them.

Dr. LOCKHART ROBERTSON—I suppose, sir, you find some desire on the part of friends to have the patients at home?

The CHAIRMAN replied that country asylums were too full, and it would be a great advantage if superintendents could be allowed to persuade the friends to receive their unfortunate brethren back again to their own homes; many would be glad to do so.

Mr. MOULD, in reply, stated that he ought to have mentioned at the outset that he was only describing what had been done under his own supervision. He was quite aware that a similar plan of separate dwellings had been carried out in Scotland as mentioned by Dr. Tuke, before it had been tried in England, and that Dr. L. Robertson had also established boarding out. Baron Mundy, on Mr. Mould showing him a photograph of the first villa residence at Cheadle, exclaimed, "Mein Gott. Why! you have got my house!" referring to the model house sent by the Baron to the Paris Exhibition, after which plan the house had been erected at Cheadle. Dr. Robertson had said that the expense of boarding out patients was nearly as great as keeping them in an asylum. On that point he (Mr. Mould) had no experience. He knew of one casewhere a patient had been boarded out at the Isle of Aman, he did tolerably well in the summer, the reports of the medical man were admirable, and wound up by saying, "leave him a little longer, and he will recover." He had then been there 16 years, and he was very dirty. (Laughter). That was the only instance with which he was acquainted of the results of boarding out patients apart from medical superintendence, and he thought it was hardly favourable. Dr. Wickham had sent him a pamphlet in which the Scotch system of boarding out patients was fully described, and gave it as his opinion that there were individual cases in which the practice answered, but as a rule they would be better cared for in the county asylums. At Cheadle they took the labourers' cottages, as many as they could get, and thus became proprietors to a large extent in the district, and if any cottager or cottager's child interfered with a patient, the cottager would be evicted, just as in Ireland, and very properly so. Professor Inglis had told them that patients boarded out were quite as well off as in asylums, but that this should be under supervision, and these patients were under his own control. He had not, however, stated the expense, nor whether the separation was complete, and free from irregular control. With regard to Dr. Eastwood's experience in private asylums, he had no doubt that living in a family was better than the plan adopted at Cheadle, but he could not have a patient in his own house without exciting the jealousy of other patients, and he took care that none were admitted. With regard to the separation of a bad-tempered patient from the rest, this was a great advantage; he had a lady at Cheadle who would upset the order of the whole place, and if they had not a cottage in which to place her, she would have to be removed at once and altogether.

The CHAIRMAN next called on Dr. Eastwood to read a paper "On Craniology," as stated in the programme, though the title might, perhaps, have to be slightly altered.

Dr. EASTWOOD said he accepted the title, although it was not quite what he wished.

(The Paper, which is in type, will be published in the next number of this Journal.)

The CHAIRMAN said the paper just read had travelled over a great extent of ground and opened up many interesting subjects for investigation. He hoped they would have many remarks upon it.

Dr. LOCKHART ROBERTSON asked on what authority Dr. Eastwood made the statement that the head of Napoleon I. was smaller than those of many men in his army.

Dr. EASTWOOD replied that he was unable to give the authority, but he had read some statement to that effect, and believed it to be true.

The CHAIRMAN said if it were true, it was a remarkable fact, because from the portraits of Napoleon the contrary would be assumed.

Dr. ROGERS suggested that as Napoleon was a small man, his head, though large relatively, might be smaller than the heads of some of the big men of his army.

Dr. ROBERTSON remarked that all men who greatly influenced other men had had large heads. Men of great general power of mind were thus distinguished. The

late Dr. Whewell was an instance of this, and no man at Cambridge in his time could at all compare with him in mental power.

Dr. BATTY TUKE took exception to Dr. Eastwood's statement that higher orders of instinct amongst animals was associated with complexity of the convolutions. The dog and the fox had much less complex convolutions than the sheep or goat, and no one could say that the latter possessed a higher order of instinct.

The CHAIRMAN said, wherever great intellectual power—not special faculty—was possessed there would be found a large head. It was a thing that struck ordinary observers, that in any gathering of a scientific society, the heads of its members were of a different class altogether to those found in a gathering of the mere “hewers of wood and drawers of water.” A man with a small head might have special power, as for music for instance, but a man of large general mental power would have a large head. The title of the paper “Craniology” was not inappropriate, as it had dealt with the cranium and mind. The title “Phrenology” was a misnomer as applied to the mind. It was impossible to accurately measure the large convolutions of the hemispheres, so that they could not reach the shape of the brain from that of the skull. To him it was a very interesting fact to learn from a gentleman like Dr. Eastwood, that the form of his head had changed between the periods of two measurements of it, before and after an interval of several years. This was a point admitted by some and disputed by others, and he for one thanked Dr. Eastwood for the facts he had stated.

Dr. EASTWOOD, in reply, said that what he had stated about the head of Napoleon was quite correct. He was a very small man, but had absolutely a large head, and relatively a large head; still, not so large as some in his army. We noticed this, in actual life, that some persons had very large heads. He had been very much struck the other day on measuring the diameter of a very large head. He had gone to a hatter to try to procure a very large hat for a patient, when the shopkeeper showed him one, remarking at the time that it was the largest size they kept, and would fit only two persons in the place—the one being the hatter himself, and the other the vicar, who was an average clergyman, not remarkable for his intellectual attainments. With regard to the convolutions of the brains of animals, there were many exceptions; and these did not seem to have much relation to the intelligence of the animal. Dr. Livesay had gathered some very interesting particulars as to the character of the patients, and the diseases under which they laboured; and his plan for noting these particulars was very good.

Dr. BATTY TUKE then read a paper on the insufficiency of the naked eye to observe the brain of insane persons. The paper was illustrated by microscopical specimens, and an instrument for preparing these.

Dr. L. ROBERTSON suggested that Dr. Tuke should contribute his valuable paper to the Journal, and in this way it would be far more useful than in being thrown away on a small local meeting like the present.

The CHAIRMAN thought it would be well to accompany the paper with illustrative diagrams. They were all much indebted to Dr. Tuke for bringing the paper before them, and he deeply regretted there had been so small an attendance of members to listen to it. He concurred very heartily in the suggestion that it should appear in the Journal.

Dr. LOCKHART ROBERTSON proposed a vote of thanks to the Weekly Board of the Manchester Royal Infirmary for the use of their board-room, and also to the resident medical officer (Dr. George Reed) for his hospitality.

Dr. LEY seconded the motion, which was adopted unanimously.

The CHAIRMAN said the Secretary of the Association would be instructed to convey the resolution to the respective parties.

Dr. ROGERS proposed a vote of thanks to the gentlemen who had read papers, regretting at the same time that there was not a larger attendance to listen to them.

The resolution was seconded, and carried by acclamation.

Dr. EASTWOOD and Mr. G. W. MOULD briefly responded to the vote of thanks.

Mr. MOULD moved a vote of thanks to Dr. Hitchman for his services in the chair, which was seconded by Dr. HENSON, and adopted.

The CHAIRMAN having acknowledged the compliment, the meeting closed.

The members attending the meeting afterwards proceeded to the Cheadle Lunatic Asylum, and dined with Mr. Mould, the resident Medical Superintendent.

MEDICAL SUPERINTENDENTS OF HOSPITALS FOR THE INSANE IN IRELAND.

It will be seen that an effort is being made to improve the position of medical superintendents of Irish District Asylums. These gentlemen have pre-eminent claims on the consideration and sympathy of Parliament and the public. Their office is one of difficulty, often accompanied with danger. From day to day, they are in constant contact with a most embarrassing disease. Their life is one whole tissue of worry and excitement. It is equally burdened with care and responsibility—care and responsibility unshared and unassisted by others. Unlike other practitioners, they are compelled to bear the weight of a great establishment, and, for all its errors and inequalities, they are required to give an account. As Lord Shaftesbury very fairly stated before a Parliamentary Committee, “the wear and tear upon their nervous system is such that it may be considered a miracle that so many of them can bear it.” Yet no class in the community has been so hesitant in preferring the recognition of its claims. The utmost modesty has been shown by the medical superintendents of our hospitals for the insane. In England, they have been treated with much more indulgence and generosity. After fifteen years’ service they are entitled to a superannuation allowance of three fourths of their salary and allowances, and, on remaining in office after that time, an additional sum is given. What is the position of the Irish superintendents? Will it really be believed that, in this country, they are compelled to serve for forty years before they can ask the Government for the same retirement? The partiality of the law in this, as in other circumstances, is positively provoking. If Ireland form an integral part of the British Empire—and we are constantly being reminded of this fact—why are we not governed by the same measure of justice? It does seem that British statesmen are indifferent to our wants—that penal enactments are not yet altogether repealed. Such irregularities may appear very insignificant and unoppressive; but, when we gather together the many unequal provisions of British law, and examine them in the aggregate, it is really no wonder that our people are oftentimes discontented. Our medical superintendents have a just right to be treated in the same way as their English brethren. The same rule should prevail here as across the water. The contrast in the period of service required in each case to qualify for superannuation must really appear startling; and we trust that Lord O’Hagan, in advancing his Lunacy Regulation Bill, will correct an anomaly which cries for amendment. The medical superintendents in Ireland are appointed by the Government, though their salaries are paid from the county rates. It is surely the duty of the nominator to protect the interests of his nominee.—*Down Recorder*.

CLINICAL INSTRUCTION IN INSANITY.

WE lately noticed a paper by Dr. Sibbald upon “Clinical Instruction in Insanity,” and the importance of the subject induces us to consider it somewhat more fully. There can be no question that the absence of all means of clinically studying mental disease is one of the gravest drawbacks of a London medical education. Only within the last few years has instruction concerning it been afforded to the students of our metropolitan schools by systematic lectures, and even these are absent in some. But those who lecture know how vain a thing it is to describe insanity and insane patients to men who never see a single case. True, we have in the metropolis two large lunatic Hospitals, which would seem to exist specially for clinical instruction, and for the immediate reception of such urgent and acute cases as would serve admirably for the purposes of a *clinique*. But clinical teaching in them there is none, and there are so many difficulties and delays in the way of receiving patients, that one of them, at any rate, is half empty. Dr. Sibbald, however, draws our attention to the fact that at

Berlin insane wards exist *in a general Hospital*. In the Royal Charité, insane patients are received and treated like the other sick :—

“Within the grounds there is a detached block of building, the first and second floors of which are occupied by recent cases of insanity. There is little in the construction of the building distinguishing it from the other portions of the hospital. With the exception that comparatively few of the patients are confined to bed, that a larger number of attendants and nurses is provided, and that more care is taken to obtain occupation for such as can be industrially employed, there is little to indicate any special peculiarity in its organisation. The use of mechanical restraint has been abolished, solitary seclusion is very little resorted to, and during many visits that I paid to the wards I always obtained evidence of humane and orderly management. The dress of the patients was that adopted in all sections of the Hospital. The Physicians stood in precisely the same relation to the insane patients as they did to the phthisical or fever patients. Clinical lectures were given during the summer session by Professor Griesinger three times a week, in one of the rooms of the lunatic section, the first portion of the lecture being given without the presence of any patients. The patients were then brought in singly, and their condition demonstrated while the Professor held a conversation with them. On every occasion in which I was present, such feeling as was exhibited by the patients seemed chiefly to be one of satisfaction with the attention paid to them.”

Dr. Sibbald, as an Asylum Physician and now a Deputy Commissioner in Lunacy for Scotland, would naturally criticise with a jealous eye the management of such wards, and his testimony in their favour is most valuable. When special Hospitals have been condemned, we have always heard lunatic Hospitals placed in a category of their own, and lunatics spoken of as patients who could not by any possibility be treated upon the premises of a general Hospital. Yet it has been and can be done, and we trust may be one day done in London as well as in Berlin. Asylums for the chronic insane there must be. The number to be treated in a general Hospital must necessarily be small, but a small number would suffice for clinical instruction. It is not to be expected that every one of our Hospitals should open such wards, but if schools were amalgamated, as we trust they some day will be, a sufficient number might certainly be instituted. Then, and not till then, will mental disease take its proper rank in our pathology. Insanity will no longer be a mysterious something upon which a lawyer is to be considered as good an authority as a doctor. Our students will be able to compare the unsoundness of mind depending on diseases now treated in general Hospitals with that which is called insanity, and at present relegated, as something quite different, to a lunatic asylum. Doubtless the governors of our Hospitals would at first shrink in horror from the prospect of opening a lunatic asylum, and encountering Commissioners, Acts of Parliament, and other such bugbears; but we are told that the thing exists, and we hope that some day it will exist here. The importance is so great that we would beg for it the serious consideration of the Profession, and through the Profession of the public, who are vitally concerned in the lack of instruction under which the Profession now labours.—*Medical Times and Gazette*.

SYPHILITIC DISEASE OF THE BRAIN, INVOLVING THE CAROTID ARTERIES.

Dr. Moxon has contributed the following account of the severe ravages of syphilis in one case to the “*Medical Times and Gazette*” of June 24th :—

“The effect of syphilis on the arteries is now an important and interesting question. Some authorities believe that the aorta is frequently directly attacked

by syphilis; others doubt this. I have never yet found a probably syphilitic deposit in a great artery along with disseminated syphilitic formations in other parts. The appearances that are set down as syphilitic by Dr. Aitken and others are too like the common deforming arteritis of advancing years to allow a certain conclusion of their syphilitic nature. But there is no doubt of the occurrence of syphilitic disease of arteries of middle size, such as the carotid and basilar.

"The following case is not one of primary arterial disease, but it shows well what terrible results may follow from syphilitic disease seizing upon a cerebral artery:—

"The patient was a man, aged 30. He was well-built and nourished, and with a good healthy skin and plenty of hair and beard. He applied in December, 1870, among my out-patients at Guy's, suffering from intense headache. There was no local paralysis, etc., but the headache was so intense that it was difficult to retain his attention. He would go aside and rest his head between his hands on the mantelpiece instead of answering. He, however, gave me to understand that he had had chancres several times within the last seven years, but he denied secondary symptoms. He had no apparent syphilitic cachexia. The man was at once admitted to Stephen Ward under the author's care, and iodide of potassium given to the extent of a drachm in the day. This produced no ill effect, but the headache diminished with wonderful quickness, and in a few days he was quite free from it. In three weeks he left the hospital, being quite well and lively, and anxious to get to his work. He was cautioned that on the reappearance of such pain in the head he should at once come back.

"Four months afterwards he was again admitted to another ward, his symptoms being intense headache, as before, but now with decided somnolence and mental weakness; he vomited sometimes, but had no local palsy. The iodide of potassium, which was given to him in three-grain doses, often returned, through the irritability of the stomach. He grew worse, and had an attack of an epileptiform kind, marked by entire insensibility and fixation of the eyes in an upward and inward direction. He then sank gradually during a fortnight, with all the symptoms of softening of the brain.

"Inspection of the body showed a mass in the sella tursica of about the size of a half walnut, composed of half fleshy, half caseous material, such as makes up syphilitic gummata. The dura mater, pituitary gland, and the parts of the floor of the third ventricle adjacent were confounded together in the mass, and the bone was superficially diseased. The optic nerves were implicated, and so were the carotid arteries; both of these were affected, the left being almost entirely closed up, its wall wrinkled longitudinally by swelling, and by pressure from without. The left brain was, for the most part, softened to pulp, some parts irregularly defined, remaining comparatively firm. The right brain showed a lesser degree of the same change; the cerebellum and pons were healthy. The state of other viscera gave important aid in identifying the disease. Both testes were good examples of syphilitic sarcocoele, and the liver and spleen had numerous characteristic syphilitic deposits in them—*i.e.*, deeply sunken scars adherent to parts around, and having in their depth caseous patches, surrounded by zones of fibrous wasting tissue—these patches in contrast with the healthy remainder of the organs.

"It is worthy of remark that, while syphilis is thus unsparingly general in its attacks upon organs, yet it plays over much the same series of organs as other diseases. I mean that vulnerable or much-abused organs which suffer disproportionately from common causes of disease, suffer also, in much the same proportion, from syphilis, while the thyroid, spleen, capsules, deep-seated bones, and, indeed, generally those parts which are not obnoxious to other "common" diseases, escape also in syphilis. This suggests that syphilis acts as a factor cumulative with other factors of disease. An over-worked part in a syphilitic is more liable to syphilitic accidents—just as, in an untainted person, that part easily falls under common accidents. Indeed, it appears that the taint of syphilis induces circumstances of little intrinsic importance to determine a local outbreak of disease. As an easily observed instance of this, take the common occurrence of

pigmented patches on parts of the skin that are subjected to pressure by buttons, etc. Indeed, as Mr. Hilton in his very interesting lectures used to enforce, you may thus often find valuable evidences of syphilitic taint which, in parts of the skin that do not undergo slight pressures, are not produced. We get from these facts suggestive hints as to the importance of easing vital organs from overstrain, etc., in persons who have syphilis about them. The case is significant as showing the effect of large doses of iodide compared with that of small doses."

HOMICIDAL INSANITY.

A case of child murder has recently been tried before the High Court of Justiciary at Edinburgh, and the prisoner, the mother of the two children murdered, has been acquitted on the ground of insanity. The case is an important one on several grounds. Professor Laycock and Dr. Heron Watson gave evidence in favour of the prisoner's non-responsibility, and the same view was taken by the other medical men engaged in the case. The prisoner was a poor woman named Eliza Sinclair. She had been charged with pilfering in a shop; she went home, wrote a somewhat incoherent letter to her husband, killed two children by cutting their throats, and ineffectually cut her own throat. Evidence was given to the effect that she had been weakened by twelve months' lactation, and by a vesico-vaginal malady. It was also known that there was an hereditary tendency to suicide in her family. She had also been the subject of nocturnal epilepsy and somnambulism. But neither of these latter facts could be proved at the trial, on account of some peculiarities in Scottish law. Sir James Moncrieff, the Lord Justice Clerk, who tried the case, placed it before the jury in a manner which cannot be improved on by us. We therefore append the principal of his remarks:—

"If the jury should be of opinion that the woman went for the purpose of theft to the shop referred to, and that, being detected, she went home in an agony of despair, and resolved to take her own life, and not to leave her children behind her; if that was the state of mind in which she was—however lamentable and however much her mind might have been overbalanced by the sense of shame and dread of detection—he had to state his own opinion that that did not amount to a case of insanity, or anything like it. If they came to be of opinion that such was the case—it certainly approached very nearly indeed to that state of the fact, apart from the matters he was now going to call their attention to—that would not be sufficient to support the plea of insanity. . . . When the Doctors spoke about a man's uncontrolled impulse, they did not mean an impulse which his mental constitution was not strong enough to combat with, but an impulse which, through mental disease, they had not the power of controlling; and, therefore, before a case could be brought under that category, mental disease must be proved. The question was whether she was of so unsound mind as to prevent her having the power of resisting the criminal impulse when it occurred. He thought it had been proved quite sufficiently for the purpose of the prisoner's case that there was such a form of mental unsoundness as homicidal and suicidal insanity in regard to lactation. If the prisoner was labouring under an attack of paroxysm of that kind, he knew nothing in the shape of legal proposition that could possibly prevent the jury from finding that she was of unsound mind. But the difficulty was upon the fact, for up to the time she was found, on March 6, there was not the smallest trace of her having had paroxysms of this kind or any other; and there was not, so far as he could recollect, except for a few minutes, the slightest trace of mental excitement from that time to this. But there were one or two matters of great gravity they should keep in view in judging the case. In the first place it was a murder of her own children without any impulse, as far as they could see, of the ordinary passions, and that, in a question of sane or insane mind, was of the last importance. It was also proved

by medical men that such paroxysms, although they did not generally, yet sometimes came and went with great rapidity; and, out of sight, the most important piece of evidence for the prisoner was the letter which she wrote to her husband in that agony of despair about the accusations made against her. While it indicated her determination to put an end to herself, she spoke of her children as if they were to survive. It was unquestionably indicative of great excitement, and it showed an incoherency which was consistent with an insane mind. The impulse must undoubtedly have been sudden, and the jury would judge whether it was or was not proof of unsoundness of mind."—*Medical Times and Gazette*, June 24th.

Appointments.

GOWAN, C., L.R.C.S., Edin., has been appointed Assistant Medical Officer to the Worcester County and City Lunatic Asylum, Powick, *vice* R. W. Ceely, M.R.C.S.E., resigned.

GRIFFIN, L. T., Ext., L.R.C.P.L., L.R.C.S.I., has been elected Visiting Physician to the Kerry District Lunatic Asylum, Killarney, *vice* Murphy, appointed Resident Medical Superintendent.

MILLSON, G., M.R.C.S.E., L.R.C.P.L., has been appointed Assistant Medical Officer Female Department, Middlesex Lunatic Asylum, Colney Hatch, *vice* R. Carter, M.D., M.R.C.S.E., L.S.A.L., resigned.

MURPHY, WALTER WILLIAM, M.D., M.R.C.S. Eng., has been appointed by the Lord-Lieutenant of Ireland the Resident Medical Superintendent of the Killarney District Hospital, which office became lately vacant by the much lamented death of Dr. Martin Shine Lawlor, who had for eighteen years held it, and fulfilled its duties most ably and devotedly.

SKELTON, J.M., M.B., L.R.C.S.I., has been appointed Assistant Medical Officer to the Metropolitan Asylum, Leavesden, Herts, *vice* A. Strange, M.D., L.R.C.S. Edin., appointed to the Middlesex Lunatic Asylum, Colney Hatch.

SHAW, THOS. CLAYE, M.D. Lond., M.R.C.P.L., Medical Superintendent of the Metropolitan Asylum, Leavesden, has been appointed Lecturer on Psychological Medicine at St. Bartholomew's Hospital.

SHEPPARD, E., M.D. St. And., M.R.C.P.L., Medical Superintendent of the Middlesex Lunatic Asylum, Colney Hatch, has been appointed Professor of Psychological Medicine at King's College, London.

THOMPSON, G., L.R.C.P.L., M.R.C.S.E., Senior Assistant Medical Officer, and formerly Resident Clinical Clerk, at the West Riding Asylum, Wakefield, has been appointed Medical Superintendent of the Bristol Lunatic Asylum, Stapleton, *vice* H. O. Stephens, M.D., M.R.C.P.L., resigned from ill health.

WOOD, T. O., L.R.C.P., Edin., M.R.C.S.E., Medical Superintendent of Dunston Lodge Asylum, near Newcastle-on-Tyne, has been appointed Lecturer on Psychological Medicine in the Newcastle College, Durham University, *vice* Dr. Hugh Grainger Stewart, Medical Superintendent of the Newcastle Borough Asylum, Cox Lodge, deceased.

Books, Pamphlets, &c., received for Review, 1871.

1. *Practical Treatise on the Medical and Surgical uses of Electricity, including Localised and General Electrization.* By George M. Beard, A.M., M.D., Fellow of the New York Academy of Medicine, Member of the New York County Medical Society; and A. D. Rockwell, A.M., M.D., Fellow of the New York Academy of Medicine, Member of the New York County Medical Society—with 102 illustrations. New York: William Wood and Co. 1871. *See Part II. Reviews.*

2. *Dynamics of Nerve and Muscle.* By Charles Bland Radcliffe, M.D., F.R.C.P. London: Macmillan and Co. 1871. *See Part II. Reviews.*

3. *Discourses on Practical Physic.* By Benjamin W. Richardson, M.A., M.D., F.R.S.

I. On Physical Disease from Mental Strain.

II. On Research in Medicine.

III. On Intermittent Pulse and Palpitation.

London: J. and A. Churchill. 1871.

(*The first of these discourses, which was delivered before the Medico-Psychological Association, has appeared in this Journal; the second was delivered to the St. Andrew's Medical Graduates' Association; and the third to the Medical Society of London. Like all that Dr. Richardson writes, they are vigorous, eloquent, suggestive, and well repay perusal.*)

4. *The Physiology and Pathology of Mind in the Lower Animals.* By W. Lauder Lindsay, M.D., F.R.S.E. Edinburgh: Oliver and Boyd. 1871.

5. *The Action of Neurotic Medicines in Insanity.* By T. S. Clouston, M.D. The Fothergillian Prize Essay for 1870.

This Essay appeared in the "British and Foreign Medico-Chirurgical Review," from which it is now reprinted. We wish that so good an observer as Dr. Clouston would try, for experiment's sake, the plan of treating a certain number of acute cases of insanity without giving any neurotic medicines whatever. It would be interesting to know whether they did or did not get well as soon as an equal number of cases treated with chloral, opium, cannabis Indica, bromide of potassium, or any other neurotic drug.

6. *Mittheilungen aus der forensischen Psychiatrie.* Von Professor Ludwig Meyer. (*Reprinted from the Archiv für Psychiatrie.*)

7. *Observations on Aphasia.* By Alexander Robertson, M.D. (*A short but valuable paper. Reprinted from the "Glasgow Medical Journal."*)

8. *Remarks on the necessity for Legislation in reference to Habitual Drunkards' Bill,* and list of donations. By T. Needham, M.D., together with a reprint of the "Habitual Drunkards' Bill," and list of donations.

(*Dr. Needham points out forcibly the evils which flow from the impossibility of placing under control a person who is ruining himself and his family by habitual drunkenness. There can be no doubt of it. We are strongly of opinion, however, that those who are promoting the so-called "Habitual Drunkards' Act," do not act wisely in calling it by that name. It is far too suggestive of the "Habitual Criminals' Act." Moreover it is, or ought to be, aimed against that sort of drunkenness which is really insanity, which cannot be said of all forms of drunkenness.*)

9. *Handy-Book of the Treatment of Women's and Children's Diseases, according to the Vienna Medical School, with prescriptions.* By Dr. Emil Dillnberger. Translated by Patrick Nicol, M.B. J. and A. Churchill. 1871.

(*A carefully executed and creditable translation of a work likely to be very useful to the practitioner.*)

10. Subject and Object as connected with our Brain, and a New Theory of Causation. By R. Verity. Longmans and Co. 1871. *See Part II. Reviews.*
11. Die Stellung der Geisteskrankheiten und verwandter Zustände zur Criminalgesetzgebung. Von Professor Ludwig Meyer. (*Reprinted from the Archiv für Psychiatrie.*)
12. New Facts and Remarks concerning Idiocy. Being a Lecture delivered before the New York Medical Journal Association. By Edward Sequin, M.D. 1870.
13. The Lecture of the Most Rev. the Lord Archbishop of York, delivered in connection with the Christian Evidence Society at St. George's Hall, examined and criticised by Julian. Trübner and Co. 1871.
14. Julian's Reply to the Dean of Canterbury's Lecture on Science and Revelation. Trübner and Co. 1871.
15. Die Kant'sche Erkenntnisslehre widerlegt von Standpunkt der Empirie, Ein Vorbereitender Beitrag zur Begründung einer physiologischen Naturauffassung. Von Edmund Montgomery. München. 1871.
16. American Religion. By John Weiss, Boston, 1871.
17. Thirteenth Annual Report of the General Board of Commissioners in Lunacy for Scotland, 1871.
18. On the General Management of Public Lunatic Asylums in England and Wales. An Essay. By John Hawkes, M.D. J. and A. Churchill, 1871.

We have been compelled reluctantly to defer to our next number a Review of the Privy Council's "General Rules and Regulations for the Management of District Asylums in Ireland," together with the Report of the Government Inspectors of Asylums, and the Reports generally of the Medical Superintendents for the year 1870.

NOTICE.

The Twenty-sixth Annual General Meeting of the Medico-Psychological Association will, by kind permission, be held at the Royal College of Physicians, on Thursday, August 3rd, under the Presidency of HENRY MAUDSLEY, M.D., F.R.C.P. Notices of Papers to be read should be sent at once to the HONORARY SECRETARY, 37, Albemarle Street.

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The following *EXCHANGE JOURNALS* have been received since our last publication :—

Annales Médico-Psychologiques; Zeitschrift für Psychiatrie; Vierteljahrsschrift für Psychiatrie in ihren Beziehungen zur Morphologie und Pathologie des Central-Nervensystems, der physiologischen Psychologie, Statistik und gerichtlichen Medicin, herausgegeben von Professor Dr. Max Leidesdorf und Docent Dr. Theodor Meynert; Psychiatrisches Centralblatt herausgegeben von Vereine für Psychiatrie und forensische Psychologie in Wien, Redigirt von H. Beer, M. Leidesdorf und Th. Meynert; Archiv für Psychiatrie und Nervenkrankheiten, herausgegeben von Dr. L. Meyer und Dr. C. Westphal; Correspondenz Blatt der deutschen Gesellschaft für Psychiatrie; Irren Freund; Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali; Annali Frenopatici Italiani Giornale del R. Manicomio di Aversa e Della Società Frenopatica Italiana Diretti dal dott. Cav. B. G. Miraglia; Medizinische Jahrbücher (Zeitschrift der K. K. Gesellschaft der Aerzte in Wien); Rivista di Discipline Carcerarie in relazione con l'Antropologia, col Diritto Penale, &c., diretta Da Martino Baltram Scalia; the American Journal of Insanity; the Quarterly Journal of Psychological Medicine, and Medical Jurisprudence, edited by William A. Hammond, M.D. (New York); the British and Foreign Medico-Chirurgical Review; the Journal of Anatomy and Physiology, conducted by G. M. Humphry, M.D., F.R.S., and Wm. Turner, M.B., F.R.S.E.; the Dublin Quarterly Journal; The Lancet; Medical Times and Gazette; The Practitioner, a monthly Journal of Therapeutics, edited by F. E. Anstie, M.D.; the Medical and Surgical Reporter, a weekly Journal, by S. W. Butler, M.D.; the Medical Times of Philadelphia. Also the Morningside Mirror; the York Star; Excelsior, or the Murray Royal Institution Literary Gazette.

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PART 1.—ORIGINAL ARTICLES.

Insanity and its Treatment.—By HENRY MAUDSLEY, M.D.,
F.R.C.P., President of the Medico-Psychological Association, Professor of Medical Jurisprudence in University College, London.

(Being the President's address delivered at the Annual General Meeting of the Medico-Psychological Association, held at the Royal College of Physicians, August 3rd, 1871.)

I have felt no little difficulty in choosing a subject for the remarks which it is my privilege, in the honourable position of President, now to address to you. Those who have preceded me in the office have, in their several discourses, treated so fully of the most important matters relating to the department of the specialty in which we are engaged, that there seemed little left for me to say. As Editor of your Journal, my opinions, too, are for the most part sufficiently well known to you. On considering what I should do under these circumstances, I first resolved to select for my address the evidence of evolution and degeneration of mind which the study of psychology, healthy and morbid, reveals, with special reference to their bearing on the well-known views of Mr. Darwin. I am persuaded that some weighty facts and arguments in support of these views may yet be drawn from a scientific study of mind in all its manifestations—in animal as well as in man, in man savage as well as in man civilized, in disease as well as in health. Without giving an opinion upon the great question of the day—whether man be or be not descended from an arboreal baboon, it might be justly argued with no little force that, if he were so descended, or had so ascended, many of the psychological facts might be expected to be very much as they are now. The battle ground which the opponents of Mr. Darwin have chosen and hold

cannot certainly be pronounced quite impregnable, if the attack be made in the right quarter. This design, though it was partly carried into execution, I thought it best, however, on reflection, to abandon as unsuited to the occasion, and, in the end, resolved to limit my remarks to matters of more immediate practical interest to us as physicians engaged in the care and treatment of insane persons. What I have to say will be of a somewhat desultory character, and for this I must bespeak your indulgence, my aim being to excite discussion and to elicit opinions on matters of great practical interest, rather than to treat them in an elaborate and systematic manner. Instead of attempting to make a scientific display, I shall hope to elicit a display of your scientific experience, by asking, in the Socratic spirit, what we really know, and what we only think we know, concerning some matters of weighty consequence in our specialty.

The subjects then which I beg leave to introduce for discussion, and on each of which I shall proceed to make a few remarks, are:—

1. *The prevention of insanity.*
2. *The treatment of insanity in asylums and in private houses.*
3. *The use and the abuse of sedatives in the treatment of insanity.*

By putting certain considerations with regard to these important questions in a definite form, and eliciting the results of the experience of those present, this gathering may, I trust, be made permanently profitable to all who are taking part in it.

1. *The Prevention of Insanity.*

Can anything be done to check the increase or lessen the production of insanity? Few questions can be raised that are more worthy of serious reflection than this, and yet, so far as I know, it is a question that has hardly been propounded as one requiring a scientific answer. Nevertheless, it must obviously be faced if the principles of psychology are not to remain mere curiosities of speculation, but are to be applied practically, in education and in the conduct of life, to the promotion of the mental evolution of the individual and of the race. Without sharing the apprehensions of those who view with something like alarm the steadily increasing number of persons registered as insane, year after year, in

England and Wales, it must be admitted that a regular increase of upwards of 1,000 a year in the insane population for the last twenty years, to whatever cause the increase be due, is a startling fact, which may well arouse attention to any means that may be thought likely to check the increase. When, however, we proceed to tackle seriously the question of the prevention of insanity, it soon becomes evident that it is so wide and so beset with difficulties, as to render it a hard matter to treat it with that exactness which would give scientific value to the discussion. The subject must be considered under two aspects—first, in relation to the propagation of insanity from one generation to another; and, secondly, in relation to the prevention of insanity in the individual who has inherited a predisposition to it.

(a). *The Propagation of Insanity from Generation to Generation.*—Happily insanity is not a disease which, like small-pox or fever, can be propagated from individual to individual, and so be spread through a community. The lunatic is commonly in a minority of one in the world, and, as a rule, certainly cannot infect other persons with his morbid belief. Unhappily insanity is a disease which, having existed in the parent, may entail in the child a predisposition more or less strong to a like disease. I may take it for granted, I suppose, that everyone here has, with the increase of his experience, become more and more convinced of the important part which hereditary predisposition plays in the causation of insanity. For my part, I am tempted sometimes to think that no person goes mad, save from palpable physical causes, who does not show more or less plainly by his gait, manner, gestures, habits of thought, feeling, and action, that he is predestined to go mad. In this sense, I believe in fate or destiny as firmly as ever did ancient Grecian peasant who bowed his head to Phœbus Apollo, as the sun rose and the sun set. But this inherited liability to insanity may be strong or weak; it may be so weak as hardly to peril the individual's sanity under the most adverse circumstances of life, or so strong as to issue in an outbreak of madness under the most favourable external circumstances. Here, then, our practical difficulties begin. Who can estimate the degree of an inherited liability to insanity, or calculate the probable danger of it to the individual? Are we scientifically justified in declaring authoritatively to any person, on the ground of bad ancestral influences, that he ought to abstain from marriage and resolve to be himself the end of his line? Supposing even that there

had been insanity in his immediate antecedents—in his father or his mother, and supposing also that insanity had appeared in his own generation—in a brother, or in a sister, are our data sufficiently positive and exact to warrant the assertion that he will beget children who will be the heirs of the family infirmity, and that he ought not therefore to have children? It is certain that if we were interested in the breeding of a variety of animals, we should not think of continuing to breed from a stock which was wanting in those qualities that were the highest characteristics of the species; we should not willingly select for breeding purposes a hound that was deficient in scent, or a greyhound that was deficient in speed, or a racehorse that could neither stay well nor gallop fast. Is it then right to sanction propagation of his kind by an individual who is wanting in that which is the highest attribute of man—a sound and stable mental constitution? The imputation on a family which the occurrence of insanity in it is thought to be, and the concealment of it as a calamity to which some disgrace is attached, would seem to be really owing to a consciousness of the fact that it marks a defect in the highest human attributes—those by which man is what he is among animals. No wonder that argument will not avail against the feeling; we may point out that insanity is a disease which, like any other disease, is an affliction that may befall alike the just and the unjust; we may lay stress upon the hardship to the individual and the manifold unnecessary trouble to his friends which the feeling occasions: we spend our breath in vain; at the end of all such reasoning there remains a dim but deep instinct that it is not a disease which is quite like other diseases, that it is really a fall from man's high estate such as no other disease causes, and which inspires, if it do not justify, the ejaculation—better to have died than to have been so afflicted! Without doubt, the popular feeling has a real foundation in fact; a foundation which modern researches into the pathological kinship between insanity and some other varieties of human degeneracy are proving to be deeper than was at one time supposed.

It might then at the first blush seem plain that we ought to forbid anyone situated as I have supposed, to have children, but I cannot help thinking that those who would lay down such a dictum have not given the matter full and adequate consideration. This I say, although I do not sympathise with the popular feeling that what is called love between the sexes is of such a holy character as rightly to override all regard to

consequences in marriage. At the bottom there is nothing holy, nothing specially human about it; on the contrary, it is a passion which man shares with other animals, and although he has exalted it into something mysterious and sacred, as his manner is with the qualities that pertain to him, yet, when stripped of the reticences and restraints and disguises which the customs of society have thrown round it, we shall nowhere find stronger evidence of a community of nature between man and animals than in its nature and function. However strong the passion, it would not justify entrance into marriage by a person who was on rational grounds unfitted for marriage. But to my mind very great difficulties lie in the way of declaring what are rational grounds unfitting a person for marriage. Here it is where, as it seems to me, dicta have sometimes been hastily laid down without adequate consideration of the whole matter. Man is an animal, and unquestionably has much in common with other animals; but he differs widely from other animals, and that wherein he differs is a result of the extraordinary development of the nervous system in him. The functions which result from this great development of the nervous system place him in relations to nature vastly different from those which any other animal has, and render it impossible to subject him to such rules as are applied in the selective breeding of animals. Let us give the matter a little attention.

In the first place, it is impossible to determine what ancestral influences are of so baneful a character as rightly to preclude an individual from continuing his species. If in a given case we looked only to the immediate ancestors, there might be no history of insanity, and yet a grandparent may have been insane, and the disorder may show itself in one or more of the grandchildren. In this case of atavism the generation which we should have thought likely to inherit the disease has escaped, and the generation which might have been thought free from danger has been attacked. It is known, too, that a transformation of neuroses takes place through generations, so that the antecedent conditions of an insane neurosis are various in character; and they certainly have not yet been traced with precision. The son of an epileptic may be more likely to become insane than the son of a person who has been actually insane. In like manner neuralgia or other form of nervous disease in the parent may manifest itself in the offspring in the form of a tendency to insanity; and, as a matter of experience, we know that if

we meet in practice with a case of violent neuralgia, occurring from time to time in an obscure way, without our being able to assign any morbid cause for it, we may predicate the existence of insanity in the family with almost as much confidence as if our patient were actually insane. Now, if all persons in whose families there was the history of some nervous disease were placed under the ban of a compulsory continence, or at any rate were debarred from marriage, it is clear that there would be some danger of unpeopling the world.

Secondly, if we did know the ancestral history, there are several varieties of the insane neurosis, however caused, which differ much in degree, and, therefore, in danger. There are individuals marking every step in the gradation between the mildest form of the insane temperament and downright idiocy. Who then can undertake to fix upon a certain point in this gradation, and to declare with the authority of science that hitherto and no farther it shall be lawful and right to procreate children? No doubt there are persons who would consider themselves competent to do so; but we may, without more ado, take the opinion to be a sufficient testimony of their incompetence.

The third reason which I offer is the most weighty of all, for while those just adduced may lose, this will gain, force with the progress of science. Let it be supposed certain that a person will have children, one or more of whom will go mad, it might still happen that the world would gain more by one of the children who did not, than it would lose by those who did, go mad. In that case, would not his marriage, grievous as its consequences might be to individuals, be amply justified by the good done to the race? So far as we see, nature is not in the habit of making much account of the individual and his sufferings—is singularly lavish in the production and reckless in the destruction of life: of all the multitude of living germs produced, but an infinitesimal proportion ever reaches maturity; and it may well be, therefore, in the order of its evolution, that countless thousands of individuals should suffer and perish without result—as waste life.* If, then,

* Mr. Wallace has pointed out that, *as a rule*, the entire offspring of each animal or plant, except the one or two necessary to replace the parent, die before they produce offspring. A great majority of animals and plants, indeed, produce during their lifetime from ten to one thousand offspring, of which number as many as forty-nine out of fifty die before reaching maturity; the fiftieth surviving because it is best fitted to survive, because it has conquered in the struggle for existence. It does not appear that in respect of human life there is any exemption from the general law of waste.

one man of genius were produced at the cost of one thousand, nay, at the cost of fifty thousand insane persons, the result might be a sufficient compensation for the terrible cost. Are we not apt to think too much of the numbers and too little of the value of individuals?

Be this so or not, I have long had a suspicion, which experience is strengthening into a conviction, that mankind is indebted for much of its originality and for certain special forms of genius to individuals who themselves, or whose parents, have sprung from families in which there has been some predisposition to insanity. They often take up the bye-paths of thought, which have been overlooked by more stable intellects, and, following them persistently, discover new relations of things; or they display special talents or energies which they discharge in originalities, or perhaps even eccentricities of action; inspired, too, with singular faith, they are reckless of obstacles that would have daunted energy less enthusiastic. And the world is notably the gainer by their existence. Indeed, I wish some one would undertake the task of examining and setting forth how many of the great reforms of thought and action have been initiated by persons sprung from insane families, or some of whom might themselves have been thought insane. I am persuaded that if the task were well done, the world would be not a little surprised at the result—surprised to find how large a part of its noble army of martyrs they constitute. There is sufficient truth in the saying that “men think in packs, as jackals hunt,” to make welcome in any age, and especially in an age that seems rather to lack the originating impulse, the man who can break through the usual routine of thought and action, and think some new thought or do some new thing. This impulse of originality is truly a sort of inspiration, which comes not by reflection, which indeed a man cannot acquire if he have it not naturally; and perhaps it was in a recognition of this fact that was engendered the old superstitious notion that the insane were divinely inspired.

However this be, let it be distinctly understood, and ever borne in mind, in estimating the influence of hereditary action upon the individual, that there is not merely a law of hereditary transmission by which a child inherits the qualities of its progenitors, but that there is also a law of variety whereby it comes to pass that no child exactly resembles either parent, or, so far as we know, any one of its ancestors. There is a law of *invention* as well as a law of *imitation*, too much overlooked

hitherto by writers on hereditary disease, which sometimes evinces its operation in a remarkable manner in families that have a taint of insanity, and so leads to the display of originality. Add to the action of this law of invention or variety the action of another well-known law, by which a diseased organism strives, as it were, to return to a healthy type, not only in the individual but through generations, and so occasions a tendency in disease to die out, unless freshly lighted up, and it will be sufficiently evident that hereditary action in disease is very far from having matters all its own way.

If these speculations be well founded, it is clear that to forbid the marriage of a person sprung from an insanely-disposed family might be to deprive the world of singular talent or genius, and so be an irreparable injury to the race of man. It would be something like the custom which has prevailed among certain nations—to kill their weakly and deformed children; thus carrying into conscious operation the law of natural selection, by which the unfittest perish, and the fittest survive, in the struggle for existence. A recent scientific writer in Germany speaks of this practice as it prevailed among the Spartans as an “excellent example of artificially improving mankind,” whereby such beings were destroyed as would otherwise be kept alive “to their own detriment and that of others.” But the obvious objection to putting this savage theory in practice is, that a child weakly and deformed in body might turn out to be anything but weakly and deformed in mind; that it might, on the contrary, be great in poetry, philosophy, invention or action; history furnishing numerous instances of men that have done immortal things who, had the Spartan custom prevailed, would never have survived their childhood. While we know so little as we do of the laws of human production, it certainly would be unwarrantable to interfere in that way with the production of mankind, and for a like reason I cannot think science yet has the right to forbid marriage to those in whom some tendency to insanity exists.

Is the case the same, however, for a man or woman who has once had an attack of insanity? Should a person who has been so unfortunate as to lose his reason for a time ever marry? The probability that the children in such case would have a strong predisposition to insanity is assuredly very great, while it is not likely that they would have talent or genius. It is a fact of observation that a child born after an attack of parental insanity is more likely to be afflicted with

the disease than one born before the attack. The strict application of the rule would, of course, prevent a woman who had once suffered from puerperal insanity from having children afterwards. Are we prepared, then, to make this stringent application of it? For my part I should hesitate to do so, and should prefer, in giving an opinion, to consider each case on its merits, especially as many instances occur in which women who have suffered at one confinement have had several children afterwards, and have not suffered similarly again. One may justly use the strongest words of dissuasion to restrain a person who has once been insane from marrying, but how much farther than that one is justified in going does not seem at all clear, and I should be glad to elicit the opinion of those present, and the reasons for the opinions.

I am the less inclined to lay down an absolute rule, because it appears to me that there are sometimes conditions in parents which are not less powerful than actual insanity, as predisposing causes of mental degeneracy in the offspring. Take, for example that deterioration of character which is produced in the individual by a life of mean and petty deceit and grasping selfishness in business, where there is no conscience in work, where there is not a single great or generous aim, where the highest aim is the acquisition of riches, the highest ideal the appearance of worldly respectability, and the result of its pursuit a life-hypocrisy, conscious or unconscious;—and can we have at work more powerful causes of degeneracy in the next generation? It is the man who spends six days of the week in that sort of occupation, and on the seventh day appears as deacon in a chapel or as teacher in a Sunday school, whom, had we knowledge enough to warrant interference, we should do well to prevent propagating his kind. Of course no one would think of doing so, but this *reductio ad absurdum* of the matter may serve to show how little justified science is, in its present state, in interfering in the dearest interests and nearest relations of human life. It will not do much to prevent the production of insanity, by laying down rules as to who is fitted and who is not fitted to have children; its proper function for some time to come must be to learn rather than to teach, to practice observation until it has acquired much more exact data than it is yet in possession of. It is to be feared that rather loose assertions are sometimes made confidently, as if they were well-established facts of observation, when they perhaps have no better foundation than conjecture. In a recently published and excellent

work on insanity, I find it stated positively, without qualification, that the risk of becoming insane is greater for a man who has an insane brother than for one who has an insane sister; and, conversely that the risk is greater for a girl who has an insane sister than it is for a girl who has an insane brother. Now, I should have liked to ask the author, had he been present, what authority he has for making that statement, which goes forth to the world in his book as if it were a truth universally recognised.

(b.) *The Management of a Predisposition to Insanity.*—This is a subject on which an interesting and instructive chapter of medical psychology remains to be written. A person who is so unfortunate as to have inherited a predisposition to insanity, is not necessarily a helpless victim of fate or destiny; he has, or might have, a certain power over himself to prevent insanity; human will counting for something, not only in the modification of physical nature, but in the modification of a man's own nature. But the will can only be developed by exercise; cannot be fashioned suddenly and through reflection only; must be a slow and gradual growth through action in relation to the circumstances of life. A man can no more will than speak without having learned to do so, nor can he be taught volition any more than he can be taught speech, except by practice.

It may be questioned whether most of those who have written on the formation of character and the conduct of life from the point of view of moral philosophy do not overrate the *direct* power of will in the formation of tastes, feelings, habits of thought and action. Its power over the phenomena of mind is very much like the power which it has over the phenomena of physical nature; it is not despotic and direct, but indirect, victory through obedience, the guidance of forces to an end by recognition of their laws and suitable arrangement of conditions. No man can resolve successfully, by a mere effort of will, to think in a certain way, or to feel in a certain way, or even to act always in accordance with a certain rule; but he can, by acting upon the circumstances which will in turn act upon him, imperceptibly modify his character; he can thus learn to withdraw his mind from a certain train of thought and feeling, the activity of which will thereupon subside, and can direct it to a different train of thought and feeling, which will thereupon become active, and so, by constant watchfulness over himself and by continued exercise, bring about by degrees the formation of

such a habit of thought and feeling as he may wish to attain unto. He can thus make his character grow by degrees to the ideal which he sets before himself. Just, in fact, as he gains, by practice, a particular power over the muscles of his body, associating them in action for the performance of complicated acts, which, without previous training, he could no more perform than he could fly, and rendering his muscles, in this regard, habitually obedient to the dictates of his will; so can he, in like manner, gain, by practice, a particular power over the thoughts and feelings of his mind, associating them in action for the definite accomplishment of a definite aim in life, and rendering them, in this regard, habitually obedient to the dictates of the will in the pursuit of its ideal. This is the real meaning of prayer, which, when it is the sincere and earnest expression of all the energies of the individual's heart and mind, is a prediction of what he shall accomplish; though the man who devotes himself heart and soul to the acquisition of riches never perhaps prays for them with his lips—prays, indeed, vocally quite otherwise, they are, none the less, his true life-prayer, which seldom fails to bring about its own accomplishment. On the other hand, prayer which is not the hearty expression of all the energies of the being,—which is merely a formal or sentimental invocation of help from on high, is a paralysis of the will, and most mischievous to character; it is bad religion and still worse philosophy; and to inculcate or encourage such habit of supplication is to go methodically to work to undermine the will. The right scientific advice to any one who had inherited a predisposition to insanity, or to those who had the education of him, would be to strive before all things to develop his will, and, at any rate, not to allow him to believe that prayer can compensate for lack of will in the conduct of life.

Not a little mischief is done to some susceptible but not very strong minds by the rules of self-examination that are sometimes inculcated as religious duty. There can be no greater error than the supposing that to meditate upon a desire which ought not to be gratified, to bring it into prominence in order to realise its nature and feel sure of its wickedness, or to give way to excessive remorse on account of its gratification, will help to overcome it. One might as justly expect to heal a sore by continually irritating it. With a mental as with a physical grief, the right course is not to foster increased action of a morbid kind, but to give it rest,

and to allow the healthy energy of neighbouring parts to encroach gradually upon and to subdue the morbid action.

In the capability of self-formation which a man has, if it be only rightly developed, there lies a great power over himself to prevent insanity. Perhaps not many persons need go mad—at any rate, from moral causes—if they only knew the resources of their nature and resolved systematically to develop them. We who have practical experience of the insane know well what a power of self-control they sometimes evince when they have a sufficient motive to exercise it. The fear of suffering by yielding to their insane propensities suffices in many instances to hold them in check; the occasional concealment or actual denial of his delusions by an insane person, if he has something to fear from the discovery of them, or something to gain by the concealment of them, testifies to a power over himself which a sane person might sometimes envy. It is, indeed, in consequence of this power of self-control, and of the way in which those who have the care of them elicit it, that asylums have become quiet and orderly institutions, instead of being, as formerly, dens of disorder and violence. Now, if the power exists in the insane mind in such degree as to prevent the manifestations of madness, is it not reasonable to suppose that, if properly trained and exercised originally, it might have sufficed to prevent its occurrence? The pity of the matter is that it is often least developed where it is most wanted. One of the saddest things in the world to witness is the way in which children born with the evil inheritance of a taint of insanity are frequently mismanaged; those who have the care of them, and the direction of their education, being often the least fitted to exercise so responsible a function. The children are twice cursed. They are cursed in the inheritance of a bad descent, and in the training they get, or rather the want of training from which they suffer, in consequence of parental peculiarities and defects. Plutarch, in his parallel of Lycurgus and Numa, makes some sensible remarks upon the folly of leaving children to the care and government of their parents, instead of committing their education, as the Lacedemonians did, to the State. Whether it would be wise to do this in all cases, I shall not venture to say; but in the cases we are considering, it would assuredly be an excellent thing for the children.

With me, as with others, it has for some time been a conviction that, in respect of education, a high function remains to be discharged by science—the distinct exposition of those

natural laws which govern equally the phenomena of physical nature and the intellectual and moral development of man, and the foundation of education on a knowledge of and obedience to them. The highest evolution of which man's being is capable, physically, intellectually, and morally, through knowledge of, and obedience to, those natural laws which govern not only the physical world, but, not less surely, every thought and feeling which it enters into the mind of man to conceive;—this must be the aim of an education founded on a true scientific psychology. We are very far, it is true, from having attained unto this complete knowledge, but enough is known to warrant a considerable modification in the method of education that is adopted. Surely no harm can be done by teaching men that the so-called moral laws are laws of nature which they cannot break, any more than they can break physical laws, without avenging consequences. Morality has, however, been hitherto looked upon as the exclusive possession of religion, and the knowledge of it has been assigned to a different faculty from that by which man gets his other knowledge; so that it has been thought sacrilegious to treat of it from any other than the religious point of view. But it is certain that science, unless it be with suicidal intent, cannot accept this position as final; it is certain that, if there be any truth in a method of positive mental science, the origin of the moral sentiments, the laws of their development, and the causes, course, and kinds of moral degeneracy—nearly akin as those are to other forms of degeneracy—must come within the scope of scientific enquiry.

Science, in its application to human nature, cannot rest content with recognising morality and immorality as facts into the explanation of which it must not enquire, any more than it can rest content with recognising sanity and insanity as facts into the explanation of which it is not to enquire; the causes of one and of the other, and the laws by which each comes to be an instinct or impulse of an individual's nature, must be systematically sought out. There is nothing accidental, nothing supernatural, in the impulse to do right or in the impulse to do wrong; they both come by inheritance or by education. To ascribe one to the grace of Heaven and the other to the malice of the devil is an explanation which may satisfy the religious sentiment, but which can have no place in a philosophy or science of mind. As an explanation, indeed, it is on a par with that which formerly accounted for insanity as a possession by the devil. As surely as the rain-

drop is formed and falls in obedience to physical law, so surely do causality and law reign in the production and distribution of morality and immorality on earth. This is what may be asserted in the name of science, and what may be claimed to be within the scope of its future enquiries. When the claim shall be admitted, it is clear that a great revolution must take place in man's views of nature, and in the education by which he will endeavour to bring himself into harmony with it. If we may look anywhere with hope for the diminution of the sum of error, vice, crime, madness, and sin upon earth, it is to a scientific study of human nature, and to a method of education founded on the results of such a study. "If it be possible to perfect mankind," said Descartes, "the means of doing so will be found in the medical sciences."

To those, if any there be, whom this view offends, let me say a few words in conclusion. There is no question, let it be understood, of disturbing those great moral principles which are universally recognised, and which have been the same in all religions; on the contrary, by displaying their scientific basis in the operation of natural law, it may be expected that they will gain in power over human motives. That the rewards of good deeds and the penalties of ill deeds follow inevitably, will not be disputed, but it will be the function of science to demonstrate that they follow on earth. Most true it is that all sin and error are avenged upon earth by natural law, but it is not true that a man himself cannot escape the consequences of his ill doing; it would be more true to say that mankind cannot escape the consequences of a man's ill doing. This is the lesson which it cannot be doubted that a science of human nature, as it attains to completeness, will teach with an irresistible force of demonstration; and when the lesson has been truly learnt and laid to heart, may we not hope that it will influence men's daily conduct more powerfully than the hope of reward or the fear of punishment after death—which, however near it may be, always seems to the individual a distant prospect—has yet availed to do. If the wicked man can be made to realise distinctly the fact that his children and his children's children will be the heirs of his iniquities, that mankind, at any rate, will not escape the consequences of them, may not the wicked man be moved sometimes to pause in his career, and be perhaps turned away from his wickedness to do that which is lawful and right? Without being a disciple of Comte, one cannot fail to see that the religion of science

will be a sort of worship of humanity—an earnest, strenuous aim of the individual, by that prayer which is will, to do nothing that may degrade it; to do all in his might to promote its evolution through the ages. And is it not historically true, *quoad* mankind, that there has been more practical morality in certain scientific discoveries and their applications than in half its creeds?

To those who would repudiate these opinions as derogating from the dignity of human nature, and the high spiritual position of man, let me make a parting observation. It is this—that we are far from having the certainty that the dignity of man, as he is now or ever has been, is the main end and purpose of creation; that, on the contrary, it is conceivable that he is but a step in an evolution which may go as much beyond him in the future as there are steps below him in the past; and that it is certainly no little tax on faith to believe that the foundations of the earth have been laid, and all the hosts of heaven created, merely that he may ‘strut and fret his hour upon the stage and then be heard no more.’ For what is his life?

It is a tale
Told by an idiot, full of sound and fury,
Signifying nothing.

2. *The Treatment of Insanity in Asylums and in Private Houses.*

The old notions regarding insanity were—first, that the best means to promote the recovery of an insane person was to send him to an asylum; and, secondly, that so long as he remained insane there was no better place for him than the asylum. These opinions have been so persistently urged, and have been so long held, that they have become almost a habit of thought, and a habit of thought is very apt, as many experiences teach us, to be considered to be the order of nature. In order, then, to raise direct discussion of their value, I shall venture to traverse them with two other propositions. The first is, that not many persons recover in asylums who might not recover equally well out of them; and the second is, that the removal of an insane patient from the asylum sometimes directly conduces to his recovery.

At the outset it must be admitted that there are certain cases of insanity which cannot be treated satisfactorily out of asylums. But this is not because there is any special

virtue in asylum treatment; not because any special medical or moral treatment is applied there which could not be applied in a private house; but it is because there is in a well-organised asylum efficient means of exercising proper care and control, where great care and watchfulness are necessary to prevent the patient doing harm to himself or to others. The cost, too, of treating a patient in a private house is so great as frequently to leave no resource but the asylum; pauper patients must necessarily go there on that account; and inasmuch as insanity is a disease which commonly lasts weeks or months before recovery takes place, those who are in moderately good circumstances find the continued expense a burden which they can ill afford to bear. But where there are the necessary means for securing good attendance and proper medical supervision, my experience leads me to think that in comparatively few cases is it absolutely necessary to send the patients to asylums; and if such a measure can be avoided there are, of course, cogent reasons for avoiding it. I have been truly surprised sometimes at the results of private treatment in some cases in which I had formed and expressed an opinion that an asylum was necessary. I am thinking now particularly of two cases of what might be described as acute idiopathic mania, with great excitement and no little violence which I saw lately—one that of a man the other that of a woman—in which the excitement abated much under treatment in a few days, and the patients ultimately recovered. In one of these cases the attacks recurred for a time in less violent form, at intervals of three or four weeks, and the issue was happy, so that here was a case of recurrent mania cured by treatment in a private house.

Besides these instances, I might relate others in which the best results followed private treatment; but it will be sufficient to mention two cases of insanity from masturbation; those with whom the youths were placed having taken a real personal interest in their welfare, and having exerted themselves in an admirable manner to promote their recovery. It will be admitted, on all hands, that these are very difficult cases to deal with successfully, and that they seldom, if ever, get well in asylums; on the contrary, they usually continue their evil practices there, and sink by degrees into a hopeless state of chronic insanity. The one thing wanted for such patients is some intelligent and judicious person, of higher education and position than an attendant, who will take a genuine interest in them, gain their confidence, and influence

them beneficially. In truth, it might almost be said that this is the one thing needful in the treatment of any case of insanity, and it is the one thing which, from the circumstances of the case, they are not likely to get in an asylum. Asylum treatment certainly has its advantages; the discipline of the establishment counts for a great deal in some cases; but it has this great disadvantage,—that the patient's individuality is little considered; he becomes one of a crowd, the majority of whom are not expected ever to get well, and his moral treatment is little more than the routine of the establishment and the dictatorship of an attendant.

In making these remarks, I do not overlook the value of the skilled attendance and of the supervision which asylums furnish, nor do I fail to recognise that to secure these advantages is the real difficulty in private treatment. But there is no sufficient reason why the thing that has been is that which shall be in this matter—why some changes may not be gradually brought about which would render treatment in private houses more easy than it is at present. On some occasions it has occurred forcibly to me that it would be an excellent thing if the practice was adopted of granting licenses to suitable persons to receive two or three patients. As the law stands, any one may legally receive into his house a single insane patient, if he only complies with the proper statutory forms; but no one can receive more than one patient, unless he have his house licensed for the purpose; and, according to the practice in vogue, a license very seldom is granted to a person to receive two or three patients. Now it seems to me that there are some cases in which licenses might very properly be granted for two or three patients. Why should not any respectable person, who had suitable accommodation in his house, be allowed to receive patients suffering from insanity just as he would receive patients suffering from any other disease, due care being taken that the proper legal forms were complied with, and that efficient supervision was exercised? Insane persons are not patients of the State; all its concern with them is to see that they are rightly cared for; and there is no reason to believe that it ever was the intention of the legislature to limit the granting of licenses to regular asylums. To make such a limitation is to drive insane patients into asylums; to keep up the old and bad theory that insanity is a disease quite out of the category of other diseases, demanding a sort of incarceration; to make the treatment of it the monopoly of existing

asylums, and to render it impossible for any physician to practice with much success in the treatment of mental disorders who has not set up for himself an asylum.

Another reform which would, in the end, conduce much to the comfort and welfare of the insane would be the establishment of a registry of good attendants. So important an agency in the treatment of the insane do attendants constitute—so much do the care, right treatment, and even cure of patients depend upon these instruments of the physician's will, that I have sometimes thought it would hardly be beneath the dignity of this Association to organize an office for the purpose. Certainly, no organization could equal that which an association like this might establish, embracing as it does all those who are engaged in the treatment of the insane, and I am persuaded that nothing would do more to raise the standard of attendants as a class, and to exclude from employment those who are unfitted for their responsible duties. In the absence of some such organization, it may be doubted whether an increase of wages will do much to secure a better class of persons; indeed, if the wages of attendants were doubled all over the country, it is doubtful whether it would make much difference in the class of applicants, although the increased payment might make them more anxious to keep their situations, and might give their employers more control over them.

With regard to the second point—the alleged advantages of keeping an insane person in an asylum until he is quite recovered—I will repeat what I have formerly written in my work on the *Physiology and Pathology of Mind*—that “I can certainly call to mind more than one instance in which I thoroughly believe that the removal of a patient from an asylum was the salvation of his reason.” I there mention the case of a gentleman who was afflicted with severe and frequently recurrent mania, from which it was thought he could not recover, but who escaped from the asylum and got away to America, where he prospered for two years, at the end of that time returning to England, superseding a lunacy commission which had been held upon him, and finally breaking down again. I take no little shame to myself in regard to this case, because in the first edition of my book, after describing the recurrent attacks as becoming longer and more frequent, and the intervals of calmness shorter and less lucid, I predicted a not distant dementia for the patient. Instead of going into dementia, he went to America, and I feel sure

that no one who had watched the course of his illness in the asylum, could for one moment doubt that his escape was the saving of his reason for the time, and that, if he had not escaped, he would have continued to have his recurrent attacks, and would have sunk into dementia.

That is one case; and another case, which occurred at the same asylum whilst I was superintendent of it, is somewhat like unto it. A young man had been sent there because of an outbreak of mania, the excitement of which subsided favourably after a few weeks. He appeared to be gradually and steadily recovering, though he was a little childish, when another attack of derangement came on; it was not an attack of great maniacal excitement or violence, but an attack in which he did silly, perverse, impulsive acts. This state of modified excitement lasted for about a fortnight, when he became calm and seemed sensible, though not very strong-minded. However, he did not remain well, but after a short time broke down again, and through such succession of alternating states he continued to go. His friends having visited him in his better state, thought him well and insisted upon taking him home, in opposition, I must say, to my advice. But they were right, and I was wrong; for two months after his discharge, I met him looking well physically, and perfectly rational in mind; he informed me that he had been busy at his employment ever since he left the asylum, and had not had any return of his malady. Had he remained in the asylum, I feel perfectly sure that we should not have been able to have given so good an account of him.

I could give other examples, but two more shall suffice. Some years ago I saw in consultation a young gentleman in a private asylum, who had been sent there in consequence of a severe attack of acute, violent mania. When I saw him the excitement had passed off, but he was not well, though he spoke sensibly. He heard voices reproaching or reviling him, and was addicted to doing impulsive and perverse acts of folly, or sometimes of violence. In this state he had remained for some time. The question was, whether he was likely to get well or not, and whether any change could be made in his treatment with advantage. The medical man of the asylum expressed an opinion that he was dangerous and not fit to be at large, and for my part I could not see reason to expect much benefit from his removal to private care. Nevertheless, a relative was most anxious to try a change, and fortified by my opinion that he might do so without serious risk, insisted on his removal from the asylum. The result

was that he went on well from that time and has remained well ever since.

My last instance did not occur in my practice. It is that of no less distinguished a person than the author of the "System of Positive Philosophy." M. Comte, as is well known, was attacked with insanity, and was for some time confined in Esquirol's asylum, where he did not, I believe, improve much, or at any rate did not recover; he was thought to be incurable, when he was removed from the asylum to the care of a friend, whose entire attention was devoted to him. Under this care he ultimately recovered his reason, and it was after this that he gave to the world his great work on the Positive Philosophy. Looking to the happy accident by which Comte gained the opportunity of recovering his reason, and of writing his book, may we not ask whether other systems of philosophy have not been buried in asylums?

Such cases as these certainly prove that recovery is in some instances promoted by the removal of the patient from an asylum. The confinement, the monotony, the lack of interest and occupation, the absence of family relations, which are inevitable in an asylum, especially in men of the better classes, do, after a certain time in some cases, more than counterbalance the benefit of the seclusion. The patient has no proper outlet for his energies, and an outlet is made for them in maniacal excitement and perverse conduct; he goes through recurrent attacks of that kind, and finally sinks into a state of chronic insanity—becomes an asylum-made lunatic.

We have thought so much and talked so long of the advantages of asylums that it might be well to turn for a little while to the consideration of their disadvantages. To acknowledge the existence of *these* is by no means to ignore the existence of *those*. Engaged in a special kind of practice one is very apt to become, in spite of one's self, a specialist in thought. Let us never forget, then, that the names which stand first in our department of medicine are those of men who had attained a high distinction apart from it. Pinel, Prichard, Conolly, and Griesinger are bright examples, of which we are justly proud; but they never would have been the examples which they are had they been merely specialists in science and practice.

3. *The Use and Abuse of Sedatives in the Treatment of Insanity.*

I have already occupied so much time with what I have said that I will, with your permission, leave most of what I

proposed to say on this subject to some other occasion. As, however, it has been set down as a subject for discussion, and is of grave practical importance, I may, with a view of eliciting the results of experience, state briefly the tenor of what I had thought to set forth at length. In brief, then, it seems to me that we are yet grievously in want of exact information with regard to the real value of sedatives in the treatment of insanity. Everybody gives them because there is mental excitement, and it seems a proper thing to subdue the excitement; but is it quite certain that it always is a proper thing to stifle excitement in that way? If a patient be suffering from uræmic convulsions, we do not attempt to subdue muscular excitement by giving him large doses of conium or of the woorara poison, because we know that these drugs will produce muscular feebleness and ultimately paralysis. And if a patient be maniacal by reason of some poison in his blood, bred in it, or introduced from without, as there is reason to believe a patient may be, is it any more rational treatment to quiet him at any cost by large and repeated doses of some sedative drug? Let a person be poisoned by belladonna, and he will have hallucinations of vision and will ramble in the most incoherent fashion—will be an artificially made lunatic: who would, if called to treat him, prescribe a dose of chloral or a dose of opium? One would try to help the elimination of the poison from the system, or at any rate would not do anything to check it. I do not, of course, intend to imply that all cases of maniacal excitement are caused by blood-poisoning, but it is probable that some of them are, and so far the argument is good against the indiscriminate use of sedatives. Moreover, if the excitement be not caused by blood-poisoning, but by something else, have we any scientific certainty that so long as we know not what that something else is, we are not doing mischief rather than good by giving sedatives?

The answer will of course be that, although we have no truly scientific theory to offer in explanation of the beneficial action of sedatives, no principle to guide us in their administration, yet experience has proved the benefit of them. We know not why quinine cures ague, yet no one doubts that it does cure it. Assuredly our knowledge of the virtues of quinine was not gained from any pre-conceived experiment; on the contrary, like our knowledge of the virtues of alcohol, it was an accidental discovery. The story is that a savage, weary and exhausted with ague, threw himself down by the

side of a pool, into which some cinchona trees had fallen, and, drinking largely of the water, was cured of his fever. Again, Paracelsus, who was little better than a madman, discovered alcohol while searching for the elixir of life, and, thinking he had got his elixir, died drunk. To a savage, then, and to a madman we are indebted, as it has been said, for two of our most valuable medicines. After such instances, it clearly would not be right to disdain empiricism. The appeal to the test of experience must be deemed satisfactory, if only experience support the appeal. But here it is where, as it seems to me, more exact observation is wanted. No one, so far as I know, has ever yet tried the experiment of treating one case of acute insanity without giving any sedative whatever, and of treating another case, as nearly like it as possible, with sedatives, and of observing the results. Lately I have ventured a little step in that direction: I have treated two cases of acute puerperal mania, and one case of puerperal melancholia, without giving any sedative—either opium, chloral, hyoseyamus, bromide of potassium, or Indian hemp. One case recovered in six weeks; another case, which was one of the worst cases of puerperal mania I ever saw, and in which, when I first saw the patient, 120grs. of chloral were being given daily, got well in four months; the third case is still under treatment, but is progressing favourably, though slowly, towards recovery. In all cases my aim is to dispense with sedatives as far as I can; and it often seems to me that the patient begins to improve when he begins to do without them, and not in consequence of them. I certainly must protest against the assertion that we have in the hydrate of chloral a drug which never fails to procure sleep, and never does harm, and which has rendered other drugs almost unnecessary in the treatment of insanity. It sometimes fails entirely to produce sleep; and in other cases in which it does produce sleep, or subdue excitement for a time, the patient shews no evidence of being any the better for it afterwards. Without committing myself to any fixed rule, where I am still only gaining experience, my present feeling is to reserve chloral as much as possible for use at bedtime, and to give none at all during the day. I am certainly opposed to the practice of giving a dose of the drug every three or four hours, which some medical men adopt now, as they formerly adopted the practice of giving opium in the same way. The admirable researches of Dr. Clouston have, I think, demonstrated plainly what was the value of *that*

treatment: the opium soon lost its effect; all the patients lost weight while taking it; their average temperature fell; the pulse was lowered; in all cases, to use Dr. Clouston's words, "it interfered with the proper nutrition of the body, and pushed it one step further down hill in the direction of death." Considering how much opium was given at one time, and how many patients must have been thus helped many steps down hill in the direction of death before anyone was at the pains to investigate accurately its effects, it is not too much to demand more exact information before sanctioning a similar use of the hydrate of chloral.

In marked contrast to opium, according to Dr. Clouston's experiments, stands a mixture of bromide of potassium and cannabis Indica. Under the use of this combination, the excitement was subdued; the medicines did not lose their effect in nine months; the appetite was not interfered with; the weight of the patients was increased; and the temperature fell;—in fact, the maximum of good effects and the minimum of ill effects were obtained. But although 80 per cent. are reputed to have been more or less benefited, I do not find that many got well; in fact, only one recovered. These, like other drugs, will, no doubt, generally quiet a patient, but the question is whether they promote recovery. In fact, the question is a larger one—whether the forcible quieting of a patient by narcotic medicines does not diminish his excitement at the expense of his mental power,—whether it is not, in fact, "to make a solitude, and to call it peace." *Solitudinem faciunt, pacem appellant.* The argument against mechanical restraint was that, although it kept the patient's body quiet, it really aggravated his malady. The question which I want to have considered is—whether the putting the nerve cells of the patient's brain into chemical restraint, so to speak, does really benefit them? It is quite possible that a patient's appetite may improve, that his temperature may fall, and that his weight may increase, without his mind improving. These things may happen with patients as they become demented; and I should like to ask Dr. Clouston whether he feels quite sure that his experiments for nine consecutive months with bromide of potassium and cannabis Indica have not helped his patients down hill, and burdened the rates of Cumberland and Westmoreland with some incurable lunatics. One fact, however, I must mention in conclusion, although it tells somewhat against my argument—that I have quite recently treated a case of acute and violent mania in a man with cannabis In-

dica and bromide of potassium, as recommended by Dr. Clouston, with the best possible results: he recovered in a week, when there was every probability that the disease might have lasted for weeks, or even longer. While glancing, then, critically, at the experiments, I cannot conclude without expressing a deep sense of their value and a hearty wish that we had many more like them.

Illustrations of the Influence of the Mind upon the Body in Health and Disease, with especial reference to the Imagination. By DANIEL H. TUKE, M.D., M.R.C.P., late Visiting Medical Officer to the York Retreat.

(Continued from page 180.)

INFLUENCE OF EMOTIONS UPON SENSATION.

(III.) *An emotion may excite ordinary sensations, may suspend them altogether (anæsthesia), or may induce excessive and morbid ones (hyperæsthesia and dysæsthesia).*

Passing, now, from the consideration of the influence of emotion upon motility, we proceed to examine the interesting series of phenomena resulting from the operation of the same influence upon sensation. Ever tending to be confounded with the converse succession of events, the influence of morbid states of sensibility in producing emotional disorder, its consideration requires more discrimination than that of the previous section. We can scarcely avoid employing language which is not strictly scientific, and can be only understood in a popular sense. Indeed, with two elements so closely allied as the emotional and sensational—mental feeling and bodily feeling (so-called)—it must constantly happen that in our terms, as in reality, we confound the two together, and in this blending fail to discover which is cause and which is effect, or speak of the consciousness of bodily pleasure and pain as if it were not a mental state. It is, however, perfectly easy, in spite of metaphysical difficulties of this kind, to make clear what is meant by the influence of a powerful emotion upon sensation as a part of that influence of the mind upon the body, which we are endeavouring in these papers to point out and illustrate. For example, there can be no question as to the fact that moral disgust does in

some instances cause the sensation of nausea, or that distress of mind may occasion neuralgia, or fright the sensation of cold, or that the special senses may, under fear, be stimulated centrally, so as to cause subjective sensations, whether olfactory, visual, or auditory. These facts remain of interest and importance, although the bare statement of them suggests some questions of difficulty. They are so, whether our physiology regards the functions of the hemispherical ganglia as comprising the sensational as well as the ideational elements of the passions—(see *ante*, July, 1870, p. 174)—or whether it relegates the former to the sensory ganglia. They are so, although not only do mental and physical sensations merge imperceptibly into each other—for we constantly witness the same results from emotional as from sensational excitement, physical and corporeal pain alike acting upon the body (as, *e. g.*, in quickening the circulation)—but mental sensations are so united with their associated ideas that it is difficult to separate the purely emotional from the ideational elements of passion. It is a penalty which we pay for our classifications and divisions that, however convenient they are up to a certain point, they sometimes lead us to do violence to nature; to dis sever that which is inseparable, to sacrifice in the present case, it may be, the intimate cohesion of psychical states to the idol of reducing everything in science to orders and classes.

When we start with emotion, in its bald sense, as our first element in the series of phenomena under review, we lose sight for the time of the mental conception which has determined the character of the emotion, and thereby determined, to a considerable extent, the character of the resulting physical changes. It would be idle, therefore, to pretend that we can rigidly carry out any such division as that of emotional and intellectual, desirable as we certainly hold it to be, to have these states roughly in view in psycho-physical investigations. For however difficult it may be to free an emotion from its intellectual accompaniment, we feel no hesitation in deciding that certain mental states are comparatively emotionless, while on the other hand there are mental states at once recognisable as essentially emotional, however much they may involve conception. A vivid idea, definitely directed to a certain locality, may, without generating any emotion induce a sensation. Take, for instance, the experience of John Hunter. "I am confident," he said, "that I can fix my attention to any part until I have a sensation in that part;"

words which ought to be inscribed in letters of gold over the entrance of a hospital for the cure of disease by psychopathy. Hunter's confident assertion is the more interesting, because, drawn from his own experience, it shows that the principle is not confined in its operation to the susceptible and nervous, but operates even on men of the highest mental endowments. And if calm, impassioned thought can thus affect sensation, how much more profoundly will an intense emotion, as fear or joy? "For securing attention to a limited subject, the feeling of terror is highly efficacious" (Bain). In the previous section we saw the striking influence of emotion on muscular movements, but in that influence we also witnessed its action upon sensation, when the antecedent of motion. Thus the muscular action excited in vomiting is the result of the nausea we have just instanced, as a good illustration of a sensation induced by moral disgust. Hitherto we have studied the phenomena which the emotional impulse causes in the body, perceptible by others and in this sense objective; now, we consider those phenomena which are altogether subjective. In another sense, also, are they subjective, in that they are the result of impressions from within and not from without. While they are such states of feeling as have immediate reference to the bodily organs in their relation, ordinarily, to the external world, we approach them in a reverse order to the natural one. Disregarding the outer world and the impressions thence received by the sensory nerves, we place ourselves in the inner world of mental emotion, and observe the influence which streams therefrom through the sensorium, inducing various sensations determined by a variety of causes.

Our starting point then is this: emotional impulses may act upon the sensory ganglia and nuclei of the nerves of sensation, so as to produce any of those sensations which are ordinarily induced by impressions upon their periphery.

Besides, however, these direct and purely subjective sensations, sensation may be indirectly excited by changes in the neighbourhood of the peripheral terminations of the sensory nerves, which changes are induced by emotion, but not through the channels of the sensory nerves; Claude Bernard, indeed, holds that the same nerve may transmit the sensory current in both directions* to and from the brain, but the sensations now referred to, admit of a different explanation,

* Cours de Physiologie Générale. Leçons sur les Propriétés des Tissus Vivants, 1866.

being probably due to the influence exerted by the emotions upon the sympathetic nerves, as for example in the sensation of "creepiness" from fear, the local changes caused in the skin are impressed upon the sensory nerves at their peripheral terminations. Whenever the capillary circulation of a part is increased by emotional excitement its sensibility is augmented, and the mind experiences sensations in the ordinary way, centripetally, although truly originating in an emotion. Then, again, a violent emotion or persistent morbid feelings may act directly upon the character of the blood, and the blood thus changed may affect the sensory nerves, and produce innumerable subjective sensations. The influence of the emotions on the blood has yet to be considered; this granted, the action of dysæmia in causing dysæsthesia is clear. The circulation of the blood, also, as well as its composition, is so much affected by emotional impulses, that from this cause likewise arise altered sensations, whether exaggerated or deadened. In respect to the special senses, a flash of light or a voice may be perceived, as everyone knows, as a merely subjective sensation, from central congestion, and this congestion may be caused by intense mental emotion.

Anæsthesia.—In cases of hysteria, in which there is a loss of sensation, it is difficult to decide to what extent this condition can be fairly referred to the abnormal state of the emotions, and frequently the invasion of the disorder is so gradual as not to be obviously connected with any special mental exciting cause; at the same time the observations of many physicians would confirm the statement of M. Briquet, that "it is not rare to find it coming on quite suddenly after emotion." He observes that the intense headache, generally present at the time, indicates the psychological origin of the disease. He makes the observation, in regard to cases of hysterical anæsthesia (of 1,240 of which he gives an analysis), that whatever may be the extent of the affection, whether of the whole of one side, or of the organs of sense, it only involves the parts supplied by the cerebro-spinal system, never those supplied by the sympathetic, as the intestines, lungs, &c. We are apt, I think, to lose sight of the reality and interest of cases of hysteria in general by too summarily dismissing them as "hysterical," instead of learning a lesson from their ætiology; as a German writer exclaims, "Woe unto him who swears allegiance to a word!"

Cases, in full, of hysterical anæsthesia may be seen in the "Gazette des Hôpitaux" and "Annales Medico-Psychologiques," 1855, p. 294.

We will here only mention that of a young woman who became the subject of hysteria at 18, and began to lose the sensibility of the skin of the upper extremities until, on her admission into *La Charité*, under Dr. Briquet, at the age of 22, it was found that throughout the surface of the body there was complete loss of feeling; moreover she was insensible to "electro-cutaneous excitement;" the sub-cutaneous parts, muscles, bones, and nerve trunks were as insensible as the skin, except in a limited spot on the left side of the chest, where there was tenderness on pressure, and pain without. Sense of smell was also lost, and, lastly, the sight of the left eye was imperfect.

M. Duchenne infers from this and other cases the existence of a special "muscular consciousness," but their interest to us arises from the marked and unusual train of disorders by which the muscles and skin were affected from no other cause than an internal one, which appears to have been closely connected with emotional disturbance. There can be little doubt that while local applications and drugs failed to remove the affection, some circumstances, powerfully influencing the emotions in the right direction, might have dispersed it in a short period of time.

Dr. Wilks, in "The Medical Times and Gazette," March 27, 1869, records the case of a girl to whom he was called, who had received a great fright. She had an hysterical attack, and fell into a state in which she appeared to have altogether lost the sense of touch. As Dr. Wilks observes, there is frequently in hysteric cases an absence of sense of pain, while that of touch remains perfect.

The *convulsionnaires*, of St. Médard, serve as examples of anæsthesia of the muscles. As numbers of these persons were thrown into this peculiar condition by causes known to be directly and purely mental, they admit of separation from cases of hysteria of vague or unknown origin, and may therefore be fairly employed as illustrations of the influence of emotional excitement upon the sensibility of the body. They are usually complicated with disorder of the motor system, especially a spasmodic condition of the muscles. We read in Montgeron.* "Some remain two or three days with their eyes open, but fixed; the countenance pale; the entire body insensible and rigid as that of a corpse. The most severe tortures were often applied to their bodies without procuring any evidence of pain. It is not surprising that the *convulsionnaires* persuaded themselves that all the blows they courted and received on the body left no marks, when their sensibility

* "La Verité des Miracles," 4to., 2 vols., 1737.

was so benumbed. Calmeil observes that the resistance of the skin, the cellular tissue, the surface of the body, and the limbs, to blows is astonishing. "But many of these fanatics deceived themselves greatly in imagining themselves to be invulnerable, for there has been, above twenty times, undeniable proof given that many amongst them showed, after the cruel infliction of blows which they solicited, large patches of discolouration under the skin, and innumerable contusions on the surface, which had borne the most severe assaults." (De la Folie, t. ii., p. 386, quoted by Madden. *Phantasmata*, vol. ii., p. 584).

In the case of the *convulsionnaire* Nisette, "She was struck on the head with a log, then with four logs, and then had the four members pulled in different directions At length two men stood on her body, then one man stood on her back, two others dragged up her arms, and gave her the *strapado*. They pulled her arms and legs, one person being on her stomach, they suspended her by the feet, then balanced her by the arms and legs, a man being on her back; then they turned her round like a spit, then again dragged her by the four members, two persons also pulling from below the shoulders. This pulling continued for a long time, because there were only six persons to pull. (!) After that, they again gave her the *strapado* and the ordinary *sape à la muraille*; then they trod her under foot, fifteen persons at a time."

The insensibility to pain in these cases appears to have been complete. The slight extent to which the internal organs suffered seems to be best explained by the extreme rigidity of the muscles, which was a marked feature of the case—a rigidity so frequently produced with great ease by the hypnotic method.

The distraction of the attention from impressions made upon the sensory nerves, whether painful or pleasurable, notoriously interferes with or entirely prevents the mind's perception of them; this principle forms the foundation of psychical anæsthesia. Rapt in ecstasy the devotee feels neither cold nor wounds. In those cases of hypnotism in which anæsthesia but not complete sleep is induced, the immunity from pain arises from the same cause. Of course in those cases in which there is profound slumber the insensibility is not due to the same principle, although the sleep may have been originally produced by mental influences. Mr. Braid found that if a patient *expected* an operation, his suggestions and his endeavour to absorb the mind in another subject were apt to prove unsuccessful.

The battle field constantly affords examples of the foregoing principle. In reporting the battle of Monte Rotundo (1867) a spectator writes in the "Cornhill Magazine:" "All day long the battle raged, the troops were fainting with hunger and fatigue. Certainly they were the liveliest, most patient set of sufferers I ever saw; *the certainty of victory chloroformed their pain.*"

Hyperæsthesia.—When illustrating the influence of emotional states upon vascularity, several examples were given in which pain was present as one of the results. There are other cases in which the vascularity is either not marked or altogether secondary, and in which severe pain is the prominent and primary symptoms; being the consequence of the fear of pain, or the witnessing the signs of pain in others. Thus Lauzanus records the case of a young man who watched with great attention a priest being bled from the arm for an attack of pleurisy. Two hours afterwards he experienced a severe pain in his own arm at the spot corresponding to that of the puncture, and did not get rid of it for a couple of days. ("Demangeon," p. 154.) This is a fair instance of the primarily neuralgic class of cases, caused by a stimulus acting centrally upon the sensory nerves.

Gratiolet relates that a law student who was present for the first time in his life at a surgical operation, which consisted in removing a small tumour from the ear, felt at the same instant so acute a pain in his own ear that he involuntarily put his hand to it, and cried out. Gratiolet, who himself witnessed the circumstance, does not state whether the affected ear corresponded to that upon which the operation was performed, but this is implied. The case forms an excellent illustration of simple pain caused by what is popularly understood as "sympathy"—a fellow feeling, which brings it under the category of emotional influence.

During an *émeute*, some years ago in Paris, a trivial event happened, and is related by the same authority, which is another illustration of the effect produced upon sensation by psychical impressions. A company of soldiers and National Guards, engaged in the Rue Planche-Mibray, were exposed for a few moments to a murderous fire from all sides. One of the combatants received a slight contusion from a reflected ball upon the shoulder, and scarcely noticed it. After the skirmish, however, experiencing a momentary pain in the part which had been struck, and fancying he had received a more severe injury, he felt a stream of blood flowing down

the side of his chest from the wound. "He distinctly felt it, yet the skin had not even been broken."

Gratiolet also mentions two medical students, engaged in dissection, one of whom playfully struck the other's extended finger with the back of his scalpel. Imagining that he was cut he uttered a terrible cry, and when he discovered his mistake averred that the pain was so acute he thought the instrument had penetrated to the bone. ("*De la Physionomie*," p. 286.)

Professor Bennett's case of a butcher, who, on trying to hook up a heavy piece of meat, slipped, was suspended by the arm by the hook, and when taken to a chemist said he suffered acute agony, is well known. The hook had only traversed his coat, the arm was uninjured, and yet he cried out with "excessive pain" when the sleeve was cut off in order to allow of the arm being examined.

When visiting the Crystal Palace some years ago it struck the writer that the man who then had charge of a galvanic battery could tell something about the influence of a fearful imagination. I was not mistaken, for he assured me that very often when a lady had grasped the handles of the machine she remarked on the peculiar sensations she experienced, and quite thought she was being galvanised, although he had not put the battery in action. But it is a fact, perhaps equally deserving of notice, that such subjective impressions may, as in the present instance, have a limit to their operations, for the galvanist stated that he had never observed any twitching of the hands from these imaginary shocks.

Striking proofs of the induction of bodily sensations by means of psychical agency are to be daily found in the sensations produced from mental imagery of an emotional character. Anxiety causes innumerable bodily sensations. A man pictures himself in a position of responsibility; delivering an important speech, for instance, in the House of Commons. This is instantaneously succeeded by a "qualm in the stomach." I do not now mean actual queasiness or nausea, but the well-known indescribable sensation referred to the pit of the stomach; others experience, instead, an equally well marked sensation in the legs or in the perinæum.

One marked form of hyperæsthesia of emotional origin is seen in hypochondriasis, although in many cases the attention paid to the impressions is, in the first instance at least, excited by a morbid condition of some organ of the body.

We may, however, with Romberg, refuse to admit cases thus originating as properly hypochondriacal. "Hypochondriasis can only be said to exist if the mind creates new sensations, which in their turn give rise to nutritive derangements . . . The mind is productive, it creates corporeal sensations and changes; the imagination clings to its own productions, and attaches itself to a given group of sensory nerves." ("Nervous System," vol. i., p. 184-5.)

The special direction of thought to one part, again, may cause anxiety, or anxiety may induce a person to direct his thoughts to the operations of the bodily functions. The course of phenomena in hypochondriasis is not so simple as at first sight appears. However, the fact undoubtedly remains that reflection, and especially the anxious reflection, upon any of the bodily sensations increases them to a morbid extent, and may originate a host of imaginary disorders.

The sensation of a ball in the throat, and that of throttling, so often caused by emotion, may here be referred to. By Romberg the *globus* is regarded as a direct subjective sensation—hyperæsthesia of the vagus—and not an indirect one occasioned by spasm of the pharynx, which he does not believe to be present, for "liquids and solids pass equally well through the gullet." Sir Walter Scott said he did not know what other people feel, but with him "the hysteric passion that impels tears is a terrible violence—a sort of throttling sensation." The *besoin de respirer* is a nearly allied state due, in emotional cases, to subjective irritation of the pulmonary branches of the vagus.

There are, however, agreeable as well as disagreeable psychophysical phenomena. Here, as in hypochondriasis, it is very easy to put the cart before the horse; but no one doubts that while, on the one hand, a healthy glow of bodily health acts upon the mind and causes pleasurable emotion, joy on the other hand induces that general sense of bodily comfort, or well-being, to which the term *cœnæsthesia* is usually, thought not quite correctly applied.

Heat and Cold.—The sensations of heat and cold are notably caused by emotional disturbance.

"I have a faint cold fear thrills through my veins,
That almost freezes up the heat of life."

The individual under the influence of "electro-biology," persuaded that he is in danger of being lost in the snow, shivers with imaginary, but to him no less real, cold.

Adopting the expression which the Tichborne Baronetcy Trial has made so proverbial, we may say that Shakspeare would have been "surprised to learn" that a man *can* hold a fire in his hand by thinking on the frosty Caucasus, and, conversely, can

"Wallow naked in December snow,
By thinking on fantastic summer's heat."

The commission appointed by the King of France, in 1784, to report to the Academy of Sciences on the claims of animal magnetism, reported, among other phenomena they observed, that without touching the subject or employing any means whatever, he experienced pain and very great warmth (*une chaleur très grande*), simply from mental excitement.

It is clear that fear may not only cause the subjective sensation of cold, but may also reduce the temperature by its action upon the vaso-motor nerves.

Instances occur daily of cold extremities from painful emotions, warmth being soon restored if hope or joy be substituted for "cold fear."

The influence of shame on the external ear, as well as the cheek, is proverbial. The expression "a burning shame" is not a mere figure, but involves and has its origin in the actual sensation of heat—

"Mine ears that to your wanton talk attended,
Do burn themselves for having so attended."

The evidence afforded by the heat experienced on the field of battle is of so mixed a character—it would be so difficult to separate the mental from the physical causes—that I should not attach much importance to it, as bearing upon the present enquiry; but as Dr. Rush has thought it worth while to regard it from this point of view in one of his remarkable essays, I cannot do less than quote his experience. "Many officers have informed me that after the first onset in a battle they felt a glow of heat, so universal as to be perceptible in both their ears. This was the case in a particular manner in the battle of Princeton, on the 3rd of January, in the year 1777, on which day the weather was remarkably cold. A veteran colonel of a New England Regiment, whom I visited at Princeton, and who was wounded in the hand at the battle of Monmouth, on the 28th of June, 1778 (a day in which the mercury stood at 90° Fahr.), after describing his situation at the time he received his wound, concluded his story by re-

marking that fighting was hard work on a cold day, but much more so on a warm day. The many instances which appeared after that memorable battle, of soldiers who were found among the slain without any marks of wounds or violence on their bodies, were probably occasioned by the heat excited in the body by *the emotions of the mind*, being added to that of the atmosphere." (Works, vol. i., p. 129.) It is obvious, however, that the grounds for this conclusion are far from being satisfactory.

Another observation of Dr. Rush is more reliable, that soldiers favoured by the fortune of war would remain comparatively insensible to cold. During the American war the Philadelphia Militia, accustomed to the comforts of city life, slept after the battle of Trenton in tents and barns, or in the open air, in the coldest months of the year; yet in the course of six weeks only two were ill, and there was but one death. Dr. Rush says he can only account for the healthiness of so large a number of men under such circumstances by the vigour infused into the human body by the victory of Trenton having produced insensibility to all the usual remote causes of disease. The reverse of this picture must be added to render it complete, although not directly referring to the influence of a certain state of mind in resisting cold. "Militia officers and soldiers, who enjoyed good health during a campaign, were often affected by fevers and other diseases, as soon as they returned to their respective homes. I knew an instance of a militia captain, who was seized with convulsions the first night he lay on a feather bed, after sleeping several months upon a mattress or upon the ground. These affections of the body appeared to be produced only by the sudden abstraction of that tone in the system, which was excited by a sense of danger and the other invigorating objects of a military life."

Dr. Darwin relates the following case. Although the exposure to the cold of a frosty night had no doubt considerable influence in causing a chill in the first instance, the power of fear in sustaining the morbid sensation of cold afterwards cannot be denied.

A young farmer in Warwickshire, finding his hedges broken and the sticks carried away during a frosty season, determined to watch for the thief. He lay many cold hours under a haystack, and at length an old woman, like a witch in a play, approached, and began to pull up the hedge; he waited till she had tied up her bottle of sticks, and was carrying them off, that he might convict her of the

theft, and then springing from his concealment he seized his prey with violent threats. After some altercation, in which her load was left upon the ground, she kneeled upon the bottle of sticks, and raising her arms to heaven beneath the bright moon, then at the full, spoke to the farmer, already shivering with cold, "*Heaven grant that thou never mayest know again the blessing to be warm.*" He complained of cold all the next day, and wore an upper coat, and in a few days another, and in a fortnight took to his bed, always saying nothing made him warm; he covered himself with very many blankets, and had a sieve over his face as he lay; and from this one insane idea he kept his bed above twenty years, for fear of the cold air, till at length he died."*—(*Zoonomia*. Vol. ii, 359.)

If certain mental states affect the temperature of the body, variations of temperature ought to be of diagnostic value in regard to the state of the mind in insanity. According to Dr. Ertzbichoff ("*Annales Medico-Psychologiques*," September, 1865), "Lewenhardt was enabled to diagnose a case of insanity in which malingering was suspected. Dr. Westphal, who has devoted much time to the investigation of the subject, has obtained good results. The former places the thermometer in the axilla; the latter, in the rectum. . . . The coincidence of oscillations in the temperature, with alternations of mental tranquillity and excitement, is of bad omen when it frequently occurs. With some insane patients, these oscillations are regular: thus during the days of excitement, the thermometer indicated $38^{\circ} \cdot 2$ of heat, but never exceeded this; during those of tranquillity the temperature fell to 37° —this oscillation continuing sometimes for six months. The pulse-variations are less regular; the pulse, it is true, also becomes more frequent during mental excitement, but this is due to the state of the patient, and not to a febrile condition, for this is not present. The researches of Louis Meyer, tending to prove the coincidence in the rise of the pulse with febrile action, increased temperature, and mental excitement, are far from being conclusive, for it may equally well be the result of incipient tubercular disease. In *mélancholie avec stupeur*, the temperature is always below the normal amount."

Hunger and Thirst.—No one will doubt that these sensations are modified—aroused or dulled—by the condition of the mind. A child hears water mentioned, and experiences a desire to drink in consequence. With the drunkard, the mental image of a glass of spirits will excite his peculiar

* Upon this case Wordsworth founded his poem, "Goody Blake and Harry Gill. A true story."

thirst for drink. Persons are often thirsty when, as everyone knows, if the attention be diverted, the sensation disappears. But apart from these examples of the influence of ideas—the imagination—there are cases in which emotional excitement tends to create thirst. Thus it has been observed at the commencement of an engagement. Dr. Rush, in his essay on the “Influence of the American Revolution upon the Human Body,” says, he noticed thirst to be a very common sensation among both the officers and soldiers. He adds, that it occurred when no exercise or action of the body could have excited it. (Works, vol. i., p. 128.) This is the more striking, because the circumstances of the mind being concentrated upon another subject failed to extinguish this sensation.

Hunger from this cause is not often experienced. Other mental images appear in this instance to occupy the attention to the exclusion of this. Dr. Carpenter relates an anecdote of himself, which illustrates this familiar fact. He adduces it as a proof, that the sense of hunger *originates* in the condition of the general system, the secondary phenomenon being its *manifestation* through a particular action in the stomach, which may be overlooked when the mind is otherwise employed.

He was walking alone through a beautiful country, and with much to occupy his mind; and having expected to meet with some opportunity of obtaining refreshment on the road, he had taken no food since breakfast. This expectation, however, was not fulfilled; but as he felt no hunger he thought little of the disappointment. It was evening before he approached the place of his destination, after having walked about twenty miles, resting frequently by the way, and he then began to feel a peculiar lassitude, different from ordinary fatigue, which rapidly increased, so that during the last mile he could scarcely support himself. The “stimulus of necessity,” however kept him up; but on arriving at his temporary home, he immediately fainted. (“Human Physiology,” p. 394.)

In connection with this subject, a few words may be added in regard to the influence of the peculiar condition of the mind present in some forms of hysteria, &c., in maintaining the vital power in the absence of food. The physiologist just cited records a case in which a young lady, under his own observation, took no nourishment for three weeks, except, on some days, one or two cups of tea. “Yet the strength of the patient rather increased than diminished during this

period; her muscles became firmer, and her voice more powerful." In a case of delusional insanity, cited by the same writer, on the authority of Dr. Willan, the patient, a young gentlewoman, only took a little orange juice, and yet lived for sixty days. (Op. cit., p. 399.)

Even if it be thought that such cases might have resulted differently, had a "Welsh Fasting Girl Committee" sat upon them, there is quite a sufficient number of instances of fasting for shorter periods of time in abnormal states of the feelings to show their connection. The exalted mental condition of some religious enthusiasts, amounting oftentimes to a state of true ecstasy, has led in men to results as extraordinary as those observed in hysterical females.

Special Senses.—The influence of emotion in exciting the special senses is seen in many ghost stories, visions, &c. The expression of Coleridge, in regard to this class of phenomena, is a happy one. "The imagination, under excitement, generates, and produces, a form of its own." Those who believe in real visitations from the other world, and have any knowledge of physiology, do not deny that there are subjective, as well as objective ghosts.

All this is true as fact,—whether we hold that the sensory ganglia are called into activity every time we recall to the mind the localities which we have visited, or the sounds we have heard, in accordance with the position taken by Carpenter, Bain, and others, that a sensation, and the remembrance of a sensation, exercises the same portion of the brain,—or whether we believe that the mere recalling of an object is a purely ideational act,* involving only the cerebral hemispheres; while the presence of distinct illusions of the senses, as ocular spectra, implies a real, although a subjective, activity of the sensory ganglia. Can hyperæsthesia of the senses—that is, increased sensibility of the nerves themselves—be caused by certain mental states—by emotional excitement? Are the sensations excited by a subjective stimulus as truly sensations as those excited by an objective one? It is obvious that, in regard to the first question, our present standpoint does not necessarily extend beyond the central terminations of the sensory nerves. It is sufficient that we allow that these can be excited by an emotional impulse, to account for all the subjective sensorial phenomena which follow, without supposing any change to take place in the course, or the peripheral expansions, of these nerves.

* In support of this opinion, see an article in this Journal, April, 1864, by Rev. W. G. Davies (p. 39).

With regard to the second question, which is naturally connected with the first, it is equally obvious that as sensation, and the consciousness of an impression made upon the nerves, are the same thing, and as this function is seated in the sensory ganglia, and not the periphery of the nerve, it is as truly a sensation,—whether the sensorium is reached from within or from without,—whether acted upon from above or below. The individual who sees an object, which is not present to excite the optic nerve, ought to be told—not that he is wrong in saying he is conscious of the sensation experienced, but in supposing that that sensation consists of the consciousness of an impression produced upon the peripheral termination of the nerve by an external object.

We know that a man who labours under amaurosis can still behold spectra; that if he is deaf, he can still hear an audible voice; or can smell, though his olfactory nerve is destroyed;—and, therefore, it cannot be needful to suppose any centrifugal action along the course of the nerves of sense. This remains a secure position to take, even if it be true that this backward action can occur. No physiologist has gone further than Muller in maintaining that it can and does; in fact, I venture to think, that while admitting that the internal parts of the apparatus of vision are alone essential to the production of certain phenomena, he confounds two views which are distinct—the one, that sensorial phenomena of subjective origin are as truly states of sensation as those excited objectively; the other—that in the former case—there is usually a current along the nerve from centre to periphery. He is right when he says that phantasms and visions are not to be confounded with mere ideas; but when he says that they are seated “in the senses,” and that the idea in the sensorium excites the active state of particles in the retina, it would be clearer to substitute therefor the expression that the idea in the cerebral hemisphere excites the action of the sensorium and the terminations of the sensory nerves, so as to produce the same effect as if excited from a peripheral impression.

In the majority of cases of false sensations of mental origin, expectant attention appears to be the chief element in the causation, and we shall have occasion to refer to several interesting cases in a future section. In some, however, although a state of expectancy is also present, fear itself has generated this expectant condition, and in illustration of this, the two following cases may be mentioned. The first has reference to the sense of smell:—

When, during the reign of Charles I., the Parliament was at issue with the King, and there were rumours of dangerous plots, report was made to the House of one (without foundation) which was designed to blow up the members. During its reading, some stood up alarmed, including "two very corpulent members," whose weight broke a board in the gallery, which gave so great a crack, that some thought there was a plot, indeed, and Sir John Ray cried out that he *smelt* gunpowder. The result was a panic in the House, and throughout London, followed by an armed band marching to Westminster to defend the House from this imaginary gunpowder plot! (*Vide* "Pictorial Hist. of England," vol. ii., p. 242).

The effect of alarm and imagination in health upon the sense of sight, as well as upon feeling, is exceedingly well illustrated by the following account given by Mr. Braid:—

Two captains of merchant vessels arrived in port at the same time, and both went to take up their quarters in their usual lodgings. They were informed by the landlady of the house, however, that she was very sorry that she could not accommodate them on that occasion, as the only bedroom which she could have appropriated for their use was occupied by the corpse of a gentleman just deceased. Being most anxious to remain in their accustomed lodgings, almost on any terms, rather than go elsewhere, they offered to sleep in the room wherein the dead body was laid out. To this the landlady readily gave her assent, considering it better, so far as *she* was concerned, to have three such customers in her room than only one, and he a dead one. Having repaired to bed, one of the gentlemen, who was a very great wag, began a conversation with the other by asking him whether he had ever before slept in a room with a corpse in it, to which he replied "No." "Then," said the other, "are you aware of the remarkable circumstance that always, in such cases, after midnight, the room gets filled with canaries, which fly about and sing in the most beautiful manner?" His companion expressed his surprise at this. But, no sooner said than realized; for, the candle having been put out, presently there was a burst of music, as if the room really was full of canaries, which were not only *heard*, but at length the horrified novice in the chamber of death, avowed that he both *saw* and *felt* the birds flying in all directions, and plunging against him. In a short time he became so excited, that, without taking time to do his toilet, he rushed down stairs in his nightdress, assuring the astonished household of the fact, and insisting that the room really was *quite full of birds*, as he could testify from the evidence of his senses, for he had not only *heard* them, but also *seen* and *felt* them *flapping their wings against him*." (*Hypnotism, &c.* By Jas. Braid. 1852. p. 88). The captain had some excuse for saying he *heard* them, although

not for seeing or feeling them, for his companion had really imitated the note of the canary by blowing through a reed dipped in water.

In concluding this section, we may briefly state the principles which lie at the foundation of the influence of the emotions upon sensation, exciting, as stated at the commencement, ordinary sensations, or excessive and morbid ones, or suspending them altogether.

1. Thought strongly directed to any part tends to increase its vascularity, and consequently its sensibility. Associated with a powerful emotion, these effects are more strikingly shown. And, when not directed to any special part, an excited emotional condition induces a general sensitiveness to impressions—an intolerance of noise, for example, or cutaneous irritation.

2. Thought strongly directed away from any part, especially when this is occasioned by emotion, lessens its sensibility. The activity of the cerebral functions during deep intellectual operations, excludes consciousness of the impressions made upon the sensory nerves generally, and an absorbing emotion effectually produces the same result.

3. The emotions may cause sensations, either by directly exciting the sensory ganglia and the central extremities of the nerves of sensation, or by inducing vascular changes in a certain part of the body, which changes excite the sensitive nerves at their peripheral terminations.

4. There is no sensation, whether general or special, excited by agents acting upon the body from without, which cannot be excited also from within by cerebral changes (including those associated with emotional excitement) affecting the sensory ganglia.

(To be continued.)

A Recent Trial for Murder. By FREDERICK NEEDHAM, M.D.,
M.R.C.P., Medical Superintendent of the York Lunatic
Hospital.

(*Regina v. Sleight. York Summer Assizes, 1871.*)

The circumstances of this case appear to me to be so interesting, in a psychological aspect, that I venture to place them at some length before the readers of the Journal.

Charles Sleight, aged 32, of good education, was charged with the wilful murder of Maria Hailstone, at Hull, on the 27th March last.

The prisoner pleaded not guilty.

The history of the prisoner and the circumstances of his crime were as follows:—

Brought up and educated by his brother, the master of a deaf and dumb institution in Brighton, he had displayed some ingenuity and much perseverance, together with a strong moral sense, and conscientiousness verging on the morbid. His mind would appear to have been characterised by neatness and the capacity for doing routine work efficiently, rather than by expansiveness, or any great amount of power. He remained as assistant in the Brighton school up to November, 1870, when he was appointed master of a similar institution in Hull. Of this, the deceased woman who was herself deaf and dumb, was housekeeper, and here she lived with her husband, also a deaf mute. These three persons were the only inhabitants of the house, and the prisoner had, therefore, no one at home with whom he could converse excepting by signs, whilst his opportunities of society beyond the institution were extremely limited.

His conduct towards his pupils and friends and his general character had always been most exemplary. He had endeared himself to those with whom he had been brought in contact, both at Brighton and in Hull, by his amiable temper, cheerful disposition, and satisfactory discharge of the duties which devolved upon him. Shortly after his appointment at Hull he complained in letters to his friends of the depressing effect produced upon him by the change from the cheerful society at Brighton to the dull monotony of his life in Hull, the sole breaks in this appearing to have been occasional visits to the adjoining country in company with a young person to whom

he was engaged to be married. Living in the same house with the deceased, and necessarily much in her society, he soon became greatly attached to her, and upon one occasion, at least, took her on his knee and kissed her; a fact which she communicated to her husband, not in the form of a complaint, but apparently as a matter to which she attached but little importance. The husband did not speak to the prisoner respecting it, nor did it seem to produce any strong impression upon his mind.

There can be no doubt that at and from this time the prisoner had strong sexual feelings towards the deceased, but there is the best reason to believe that he never had criminal intercourse with her.

Some time before the murder a change was noticed in the conduct, manner, and appearance of the prisoner. His cheerfulness gave place to despondency. He complained of sleeping badly, and of having shooting pains in his head. His manner became abrupt and peculiar, and a medical man whom he consulted expressed the fear that he was manifesting the symptoms of incipient mania. There was no suspicion of epilepsy either at this time or subsequently.

Two days prior to the murder the prisoner complained to the Secretary of the Deaf and Dumb Institution that he felt ill and unable to do his work. He also seemed anxious about the school, and generally depressed in spirits. He said he had been greatly tempted, but did not explain how, further than by the remark that he "had not committed fornication." A copy of "Clark's Commentary" was placed in his hands, and he was recommended to study it, and what was probably more to the purpose, to get married as speedily as possible. At this time he also complained to the doctor, and to the deceased and her husband, of pains in the head and sleeplessness. And in a letter to his sister he wrote that he felt his head spinning round, and feared his reason was giving way, adding the suggestive remark, "terrible fancies keep passing through my mind."

On the evening preceding the murder he was able as usual to give an address to his pupils. At half-past five o'clock the next morning the husband of the deceased woman got up and went out to his work in the town, leaving his wife in bed, and the prisoner in his own room on the floor below, and no other person in the house. At seven o'clock the prisoner, properly dressed, went to the police-station, and announced that a woman had been murdered at the Deaf and Dumb In-

stitution in Dock Street. When asked by whom she had been murdered, he held out his finger, which was slightly cut and wrapped round with a piece of linen, and stated that he had committed the fatal act.

Up to this time he had been perfectly calm and free from excitement; but he now suddenly became wild and excited, and attempted to seize, first the ruler from the desk, and then the poker which was lying within the fender. The inspector at once had him secured and placed in a cell, and then set off to Dock Street to ascertain the truth of the statement which had been made to him; first entering the prisoner's name in the charge sheet as that of a wandering lunatic.

On searching the house the body of the deceased was found laid upon the floor of her room, the head having been nearly severed from it, and the vertebræ notched with a razor, which was found on the spot. There was no evidence of any struggle, and a medical examination of the deceased showed conclusively that she had not been violated. There were bloody water and towels, and a blood-stained shirt in the prisoner's room. The outer door of the house was closed.

Such were the main facts deposed to at the preliminary inquiry in Hull, and subsequently sworn to at the trial in York, and I was requested to see the prisoner with a view to giving evidence in support of the plea of insanity. I saw and conversed with him for lengthened periods on the 29th and 30th of July, in company with his solicitor and Mr. Walsh, of the Lincoln Lunatic Hospital, with the result of satisfying myself of his insanity, both prior to and at the time of the murder, and also at the date of such examinations. The facts upon which I relied were briefly as follows:—

1. There was evidence of strong hereditary predisposition to insanity. An aunt on the father's side was confined in the Lincoln Hospital for many years, and manifested strong suicidal tendency. A cousin on the same side was also under care, and ultimately committed suicide. A cousin, on the mother's side, was confined as a lunatic. The prisoner's elder brother committed suicide by cutting his throat with a razor.

2. The change in the temper, disposition, and manner of the prisoner previously to the murder, deposed to by several witnesses.

3. The absence of sufficient motive for the crime. That started by the prosecution, viz.: that the prisoner had been attempting to take improper liberties with the deceased, and subsequently murdered her to prevent the exposure of his

misconduct, was not only unsupported by evidence, but was contrary to that which was sworn to. For there was no trace of any struggle, either in the room or upon the person of the deceased. Recent connection had not taken place, and the prisoner made no attempt to conceal the evidences of the more serious crime.

4. The voluntary confession of the prisoner, and the manner of it.

5. His condition and statements.—I found him to have a small head, feeble aspect, and restless, agitated manner. He continually rubbed his hands over his head, which he said felt as if an iron band were fastened tightly around it. He did not seem to realise his position in reference to the law, and he expressed no great concern for his crime, nor special pity for the object of it. His only trouble appeared to arise from the probable suffering of his brothers and sisters. His own possible execution, and the distress of his betrothed evidently gave him but little concern. He talked wildly and somewhat incoherently, but seemed pleased to discuss the various details of the murder, which he narrated to me in all their horrible minuteness without manifesting the smallest evidence of feeling, or giving any indication in manner or gesture that they related to matters in which he had been personally concerned.

He said, "I had been sleeping badly for weeks. The place was dreadfully monotonous, and I had no one to speak to excepting the Hailstones, who could only be communicated with by signs. I became very fond of Maria Hailstone, and frequently felt strong sexual feeling towards her, although I was engaged to be married. I knew it was very wicked, and I struggled against the temptation, and I never allowed it to overcome me; but I felt that it was weakening me both morally and physically. On the night before the murder I was unable to sleep, and was in and out of bed all night long. I saw numbers of little black spirits flying about my room, and heard them say quite distinctly, 'You are ruined; you have not enough money to marry on; kill yourself.' These spirits go about tempting everybody; but when people are strong and can sleep they are able to fight against and overcome them; when they are weak the spirits have the best of it. They went on telling me to kill myself until I could bear it no longer, but got up and went to my razors, intending to do so. But I felt afraid, and as if I had not courage. I then knelt down and prayed God to help me to resist, and

presently I felt better: but I could not sleep. At half-past five I heard Hailstone come downstairs, and go out to his work, and then the idea suddenly came into my mind that Maria Hailstone had ruined me, and I must kill her. I got out of bed and went into an adjoining room, and walked about, the suggestion constantly recurring to my mind, 'Slay her, slay her.' I then went back to my own room, and took a razor from my dressing table. It was the one which I had laid down after I had resisted the attempt to commit suicide. I went upstairs to Maria Hailstone's room. The door was closed, but I opened it and walked in. She was in bed asleep. I sat down upon the bed, put my arm round her neck, and kissed her. I was very fond of her, but I felt that I must murder her. After I had been there a few moments the front door bell rang, and I went downstairs to see what was wanted. I found it was the dust boy, and I told him to call later in the morning. I felt very much vexed with him for disturbing me before I had killed the girl. I then went back to her room, feeling that I must kill her. She was sitting on the bed putting on her stockings. I again sat down upon the bed, and placed my left arm around her neck, and cut her throat with all my strength. She gave a leap across the bed, and I threw the clothes on to her feet, and left the room, feeling greatly relieved in my mind. I then went back to my own room, and washed my hands, which were covered with blood. My shirt was also bloody, so I changed it. When I had done this I began to feel as if I had done something wrong, and I therefore dressed myself and went to the police office, and gave myself up. I know now that it was wrong to murder the deceased, because she had always been very kind to me; but I felt that I had to do it, and I seemed unable to resist."

Such was the prisoner's statement, and it was in all points, where proof was possible, corroborated minutely by the evidence of the various witnesses.

Previously to the trial I told him that the plea of insanity was about to be urged in his behalf, and he said he thought he must have been mad to do such a thing. I then, as a test, suggested to him that for the purpose of such a defence it was of the utmost importance that he should be considered still as of unsound mind, because the jury would be reluctant to believe in his insanity at the time of the murder, and his recovery so soon afterwards.

I enforced this idea strongly upon him, and pointed out

that his life even might depend upon it; but I could not induce him to say, or permit me to say, that he was otherwise than perfectly sane and accountable at this time. Throughout the interview he seemed morbidly afraid lest he should be tempted by the fear of punishment to make any statement which was not strictly true.

At the trial, after the evidence for the prosecution and part of that for the defence had been heard, the jury stopped the trial, and returned a verdict of acquittal on the ground of insanity, the judge (Mellor) expressing his concurrence in the following decided words:—"I am not at all surprised at your verdict. I am quite satisfied that it is fully justified by the evidence. The conduct and character of the prisoner have been such that an act of this sort could hardly have been the result of anything but disease. The evidence was so satisfactory that I do not think it necessary to make further observations upon the case. I think the verdict must recommend itself to general approval."

The New Metropolitan Asylums.

In June, 1867, a new era was begun in the Poor Law system by Mr. Gathorne Hardy's Bill, which comprised arrangements for meeting the epidemic requirements of London, and for relieving the workhouses and lunatic asylums of the imbecile, idiotic, and chronic patients, not dangerous or destructive, but quiet in their habits, leaving behind merely the infirm poor and the acute and violent lunatics, for whom the accommodation was thought sufficient. There was also another clause providing a bevy of dispensaries, which however has not been carried out, though it was probably one of the most promising parts of the Bill. As regards the arrangements for epidemics, recent events have shown them to be inadequate; it must be said, however, that in 1867 the idea of meeting visitations of severe epidemics by temporary structures was not even in its infancy, otherwise we might have been spared such structures as Stockwell and Homerton Hospitals, which will never be filled or even half-filled in times of ordinary public health, and which are too small for great emergencies. A rapidly expansive system, as by temporary hospitals or by tents, capable of enlargement and of

folding up and packing away when done with, is the proper plan for treating epidemics. What then is the proper one for quiet lunatics and imbeciles?

What was the need for an extended system of asylum buildings for the metropolis? The Lunacy Commissioners were constantly complaining that harmless lunatics were kept, to their great detriment, in the workhouses, and that acute cases could not gain that early admission into the county asylums so necessary for their welfare. A different kind of building was proposed, because it was thought that the existing asylums were on too costly a scale for the harbouring of imbeciles and demented, that their appliances were for acute cases and convalescents, that there was a sufficient number of outstanding chronic cases to almost refill them. It was supposed that by separating the harmless and chronic from the acute and violent a less expensive dietary would be necessary, that a smaller staff would be required, and that as all intellect—or at any rate all intellectual appreciation of worldly intercourse—would be out of the question, the locale of the new asylums might be on cheap ground, though for Londoners still far away from London, far away from friends; where to be sent to live was to be sent to die, and where, once settled, it was presumed they would never again trouble society or guardians.

An appendix to the original idea was that the labour of the imbeciles employed on a large surface of land, bought cheaply, might turn out very productive; that to teach them farming, shoemaking, tailoring, &c., in short, to be self-supporting, would be agreeable to the Lunacy Laws and to public requirements. Very true; but out of this arises a difficulty, viz., that when a person, slightly imbecile though he be, has learnt to be useful and feels himself able to put forth his power, he longs for freedom, and this, though desirable, it is scarcely possible to give him; for it is a great defect in the Lunacy Administration of this county that because a person is slightly imbecile, or slightly demented, he should be put under restraint in a building where from the necessities of the case he is mixed up with and has to share the stringency applied to those whose restraint is unavoidable, but whom the necessity of protecting subjects him to the same lock and key. To the pauper-patient the case is different from the rich imbecile. In the upper classes it may be right to seclude an individual who, with no power of moderate mental energy or discretion, would throw away a large estate, or implicate old

and important family relations; but when the status of the lower classes is considered, a status to be maintained by a minimum of mental power and a maximum of manual labour, then the question of restraint of imbeciles becomes doubtful. If originality of thought were necessary for the gaining of daily bread thousands of human beings would starve. As it is, the business of the world is carried on by the result of the simplest kinds of objective teaching that have become to be almost reflex or automatic in their subjects; and thus, given a good physical constitution with strong muscles yet even feeble nerve-development, the conditions of remunerative labour are present.

That this is so is easily proved. Take the average intellect of multitudes of bricklayers' labourers, porters, hangers-on of docks, stable-helpers, &c., who, if tried by the most moderate standard of brain-scale, would be found wanting, deficient in moral sense, unable to read or write, pugnacious, incapable of the smallest process of comparison, and therefore of reasoning, wanting in application, and driven to work only by the mastering appeals of a craving appetite. And yet people of this calibre form a large class of those who find their way into these "Imbecile" Asylums. Work becomes slack, vicissitudes of weather, or the loathsomeness of their abodes bring on disease, and their only refuge is the workhouse-infirmiry; once there the defects in them are noticed, and, condemned, either for bad language, laziness, ignorance, or debility, combined with a phrenologically repulsive appearance, they are voted to be beyond the pale of society, and are sent to be immured within a stately prison. Lucky are they if, instead of the asylum, they are sent to the gaol, for once their term expired, they are free in the latter case; whilst in the former, they are dependent on the peculiar ideas of "personal responsibility" of the medical man to whose charge they are committed.

Let us take a few statistics from one of the Asylums. Here are about 500 "imbeciles" at work. Without doubt, 300 of these do an amount of daily work sufficient to keep themselves, at a fair rate of wages. But, it may be said, "these people work well enough under supervision, though left to themselves, they would be fit for nothing." Very good; but is it necessary to send them to a far-distant asylum for this supervision? Surely Boards of Guardians could find enough work and supervision for these without sending them to large and limited institutions. Taking these

300 disposable persons away, and estimating a similar number from the sister Asylum, we have a total of 600 *vacancies* which might be filled with a class really requiring admission, and would effectually drain the outlying patients in the County Asylums, and find still room to spare for new comers without the necessity of building a new asylum, as is in contemplation, or of enlarging the present ones.

A few words on the plan of construction of these new Metropolitan District Asylums at Leavesden and Caterham. The sites were chosen, the one on the north and the other on the south side of London (each distant about 20 miles from Charing Cross), for the more convenient arrangement and classification of the parishes; the northern, eastern, and western parishes sending their patients to Leavesden, and the southern and central ones to Caterham—not a very equal distribution, by-the-bye. As economy was the order of the day, a symmetrical arrangement on the block system was adopted; the “administrative” department (officers’ quarters, kitchen, laundry, &c.) forming the centre, and the blocks disposed laterally. A long corridor on each side, into which the various blocks open, completes the scheme, which is simple, easily learnt, and practical. Out-lying come the usual impedimenta of gas-works, farm-buildings, shops, &c. One great addition to the usual range of asylum buildings is especially worthy of notice, viz., a hospital removed to a considerable distance, for the treatment of infectious diseases. At Caterham so great has been the pressure for space, that this special hospital has been converted into a temporary asylum for female imbeciles. The blocks, of which there are eleven, six female and five male, are divided into two classes, “general” and “infirmary,” the former holding 160 patients each, the latter 90. Each “infirmary block” has, moreover, 12 single rooms superadded for troublesome or special cases. The original estimate was for 1,620 inmates; 730 males, and 890 females. Already the accommodation is found insufficient.

Each “general” block is built in three storeys, the ground floor, with its offices, such as lavatory, scullery, store-rooms, &c., forming the dwelling and dining-room, whilst the two upper floors are dormitories, each holding 80 beds. The cubic space allotted is 320 feet in the day room, and 600 feet in the sleeping-room; in the “infirmary” on each side the space is upwards of 900 feet. The attendant’s bed-rooms are placed at the end of the dormitories, thus affording easy proximity in emergency; and here we may note the employment of a

man and his wife as charge attendants of the male blocks, with two male attendants under them. On the lower floors are earth-closets; on the upper, water-closets. Thus, each "block" is a house by itself, independent of, and quite separate in its economy from the others. When we say that there is one Medical Superintendent, and one Assistant Medical Officer (who has, moreover, to do the dispensing), we may be credited with truth in adding that the very strictest "economy" in supply of medical men has been attained.

Though the terms of the act defining the cases proper to be sent from the workhouses, viz:—utterly irresponsible imbeciles and demented, were tolerably clear, there has been some difficulty of comprehending them by the medical officers of the various parishes and unions; thus among the patients sent down have been many of chronic rheumatism, chronic bronchitis, heart disease, simple epilepsy, *i.e.*, without mania or other dangerous complication, phthisis, debility, ulcerated legs (!), deaf-mutism, paraplegia, &c., all without the slightest mental lesion, yet unable to get their own living and a burden on the rates. All such have, of course, been discharged. But why were they ever sent? Beyond the expense incurred in sending them backwards and forwards, a great injury has been done to their personal feelings, and to those of their friends and relations in the fact of their having ever been sent to an asylum at all. How many histories of "cases" may from this cause be complicated, and medical men misled from the statement that So-and-so's father or uncle or other relation, as the case may be, was once in a lunatic asylum, the truth being that in order to take a pauper off the "indoor-relief" list, and charge him to the "common poor fund," he was improperly sent and placed under restraint. It is speaking well within limits to say that *scores* of such have been admitted and discharged.

Nor is there even the plea of economy to justify the transmission of these strictly workhouse-pensioners to the new asylums. The returns of expenses for the last quarter shew more than nine shillings per head per week! And even allowing for the fact that this is the first year of their existence, and that whilst the staff had to be tolerably complete from the first, yet the patients came in by piecemeal, there is yet no idea that the cost per head will be very materially decreased. Now, in the workhouses, the individual cost is much less, and moreover, some of the workhouses are excellently administered, and the patients themselves speak in

high terms of them, both as regards comfort and treatment. How is it then that in an asylum of more than 1600 patients, with a small staff of officers, with about 500 workers, with a good average dietary, and not excessive salaries, the weekly cost is nearly half as much again as in some County Asylums, where mixed cases of all sorts are received, and nearly as much as at Hanwell and Colney Hatch? The fault, we fear, is in the mode of administration. The system of carrying on the Metropolitan Asylums has never found favour with experienced and practical lunacy men.

So long as the authority is split up into sub-sections, each with its own leader, there must be a confliction of interests, and therefore a loss of motive power, which means waste. Another point, too, the great distance from London, and the absence of any convenient large town whence to draw supplies, cause large items for carriage and locomotion.

We can note, however, a favourable side to this plan of separating for economical purposes chronic and harmless lunatics, with imbeciles requiring restraint, from acute and violent cases; thus, in the former, from the similarity of their conditions, a simpler and more uniform diet can be used; the required quantities being greater, more advantageous contracts are obtainable; and speaking from positive knowledge, the amounts of extra diet required are very small indeed.

Next, the staff of attendants can be largely reduced—and here it may be as well to say that the nursing is after this fashion:—There are, in all, 11 blocks, six being for women and five for men; of the six womens' blocks, five hold 160 each, and the sixth (an infirmary block), 90. Of the five male blocks, four hold 160 men each, and the fifth (infirmary), holds 90. To each ordinary block of 160 patients, are four attendants, and though the supply is greater in the infirmaries, the average may be safely taken as one attendant to 40 patients (for in so large a staff one or more attendants will certainly be absent every day).

In no other class of asylums have we ever met with so low an average as one attendant to 40 patients, and yet the cleanliness and order in which we have invariably found them shew that the work can be got through, and that people may be found to do it, however severe and trying it may be. Again, the quiet habits of the patients allow of their being massed in large dormitories, saving the expense of single and more numerous wards. It is sufficient to point to a total building-cost of £80 per bed, to get a favourable comparison

with other asylums, the new Macclesfield Asylum, for instance. To counties contemplating the erection of new establishments, these principles might be advantageously borne in mind. Hitherto our asylums have been built to meet the emergencies of acute and chronic cases together, and as the requirements of the two classes are different, so do the existing structures suit neither class perfectly. For acute cases we want quiet, seclusion, &c., things more obtainable in the class of lunatic hospitals; for harmless and quiet patients the elaborate paraphernalia wanted for acute cases are unnecessary. It would surely be possible so to build new asylums as to arrange for the clubbing together of the harmless and the separation of the acute.

The plea will not hold that it is baneful from sanitary or prudential motives to club these quiet persons together in large numbers. Leavesden and Caterham shew that it is possible to have a happy family of 160 patients in a ward with very few casualties (and these mostly from epileptic fits), with great quietude and with the benefit derived from intercourse with a considerable number of their fellow-creatures.

These have been clearly shown by the new asylums, and they are, to our mind, among the most instructive facts that have been shewn. The defects are the insufficient extent of land, impeding the irrigation and the operation of the earth-closets, capable of six times their present amount of application, and the inaccessible part of the county where they are situated, isolating the patients from their friends, and creating a difficulty in retaining attendants, to whom no amount of comfort will repay loss of intercourse with the world.

To settle the problem of finally disposing the pauper lunatics in large towns, is like trying to demolish a social hydra. The following plan, however, is recommended; it has not yet been practised; probably not conceived. Let there be in each parish a building of simple construction, capable of holding say 100 to 200 strong-limbed imbeciles, and let these be employed in such work as they are best fitted for, and for which there is constant need, viz.:—paving, labouring, carting, street sweeping, &c., &c., taking care to have efficient task-masters, and the whole put under medical supervision. There would then be a chance of having our streets free from dust in summer and of snow in winter. Kept under an amount of restraint or supervision sufficient to *make them work*, they will still be able to enjoy the liberty so longed for, and to see their friends—separation from whom is one of the

greatest hardships entailed by the site of the new asylums. Under a stricter law, it might be possible and prudent to inflict moderate corporal punishment in case of malingering, or refusal to work; always, of course, under medical sanction. This may seem to be reverting to the dark days of Restraint; but any candid mind will confess that we are now in a period of reaction into a pernicious indulgence from the former exaggerated severity. Instead of the toothless and feeble old men who are now employed, and to whom it is an idle compliment to apply the word "work," we should have really sturdy youths and men, strong in muscle if weak in brain, who, if left to their own devices and the strain of competition for living, would fall prey to drink, or the acts of the wicked, but who, happy in their freedom from responsibility, and in the feeling of dependence on a stronger power, would lead comfortable and useful lives, not only *growing*, but with potentiality of some degree of *development*. This plan would have many advantages over the boarding out system; it would engage men in work to which they have been more or less accustomed, and for which there is positive necessity; it would prevent the risk of placing the mentally afflicted with imperfectly known persons; it would ensure skilled supervision, and it would keep them in the proximity of their friends, for whom they exhibit great affection, and upon whose sympathy they much rely. There would be no necessity for building afresh, for most parishes can boast of some tenement convertible to the purpose, and which by its freedom from the conventional public building style, would give more independent tone to the inmates. The parishes will not learn lessons. If they continue sending to these asylums (expressly stated in the act to be for Insane Persons ONLY) improper cases, then, without doubt, an enlargement must soon be made, for both are now full, and demands for admission still pouring in. On a recent occasion, the "Lancet," when commenting on some instances of deaf-mutes, whom it considered improperly sent to these asylums, recommended that the ordinary form of certificate used in county asylums should be adopted. Certainly, the details at present sent are too meagre; often absolutely *nil*. Great use would be derived from such items of information as to occupation, previous history, habits, delusions, &c., as are afforded in ordinary lunacy certificates; but all versed in lunacy know the utter futility of the recommendations of admission signed by the relieving officer and clergyman, or by the magistrate, all of

whom act upon the report made by the medical man—the really responsible party. If any additional security is required, let it be that of a second medical witness, as in the case of a private patient, not of lay persons, whose entire ignorance of the significance of certain symptoms, patent enough to the professional mind, might (and occasionally has done) led to a delay, possibly fatal. The public ought, on the whole, to be satisfied with the care that medical men have used in committing members of the social community to asylums. The difficulty of rightly interpreting the Act of 1867 has led to the temporary incarceration of improper cases, and of persons undoubtedly sane; all such, however, have been remitted. We commend the above scheme to the consideration of the Poor Law Board—a Board which honestly strives to do its work, though its very ancient and cumbrous machinery retards its progression, and allows evils to hold ground far too much in the van.

F. P.

Further Observations on General Paralysis of the Insane, and on the Morbid Changes found on Post-mortem Examination in the Spinal Cord. By R. BOYD, M.D., F.R.C.P., Ex-President of the Medico-Psychological Association.

(Continued from page 24 of the Journal.)

In my communication on General Paralysis in the previous number of the Journal, reference is made to tables, showing various particulars in 124 males and 31 females suffering from this disease, and in whom post-mortem examinations were made during a period extending over 20 years. As these tables were found to be too voluminous for publication in the Journal an analysis or summary only was given. A further reference to the subject may not be uninteresting, especially as relates to the spinal canal, the spinal cord, and investing membranes, since any notice of their condition in insane persons is entirely omitted, even by recent observers. These morbid changes, so frequently noticed by myself and colleagues at the Somerset County Asylum, and in many instances submitted to others for microscopical examination, can only have been overlooked in other institutions from the difficulty of exposing the spinal cord, so as to admit of its

complete examination, the instruments in common use not being suitable for the purpose. Those I have been in the habit of using for dividing the spinal column, after laying it bare with a large-sized scalpel, are a common tenon saw, a chisel and mallet, the same as used in opening the skull, and both operations may be performed with equal facility after a little practice.

Any hope we may have of being able to arrest the progress of General Paralysis, or, by a more successful treatment, to expect recovery, neither of which is impossible, although it has generally been considered the most incurable complication of insanity, must rest on a just appreciation of its pathology.

Where the disease commences in the spine and is discovered before it extends to the brain, it is quite possible that by rest and proper treatment the progress of the disease may be checked, even where the symptoms had continued for some time. Four cases given in my former communication corroborated this statement, namely, Cases I. and III., discharged recovered, re-admitted two years afterwards in the first, and thirteen months in the third. Case IV. recovered from paralysis, but no mental improvement; still in the asylum. Case VII., in which the paralytic symptoms were arrested, without mental improvement, for six years. As our knowledge of new remedies increases we may hope for still greater success.

Not many years ago pulmonary consumption was considered incurable. Post-mortem examinations in persons who died of other diseases sometimes revealed a puckering and earthy deposit in the apex of either lung, showing that a tubercular cavity had previously existed, perhaps unsuspected. By improved diagnosis and special treatment this fatal disease can, in its earlier stages, be usually arrested.

A more careful study of the treatment of the earlier stages of general paralysis may lead to similar results. In order the more fully to show the condition of the spinal cord, which has been usually overlooked, I shall extract from the tables already referred to the number of males and females showing the abnormal conditions. As regards the cases in which blood was effused in the spinal canal, it may be stated that in some large bodies, in opening the spine, some of the blood which had gravitated to the posterior parts may have found its way into the canal; also, in cases of general softening of

the spinal cord, the heat of the weather may probably have had an effect, and in both conditions some allowance is to be made for these contingencies.

Making due allowance for these, we shall still find other abnormal conditions which must have existed during life, and had an intimate relation with the symptoms and condition of the patient.

In only five males and one female was the spinal cord found, on post-mortem examination, to be in apparently a normal condition. In the 124 males and 31 females the abnormal states were as follows:—

		M.	F.
In the spinal canal . . .	Fluid was effused in unusual quantity in	14	2
	Blood in spinal canal in . . .	13	1
	A Cyst	1	1
The spinal membranes . .	Congested with blood in . . .	4	1
	Adherent in	3	1
	Thickened	3	1
	White specks on the arachnoid membrane	2	1
	Pus on ditto	1	2
The spinal cord	Congested with blood and enlarged in	2	1
	Softer than natural	32	4
	In a creamy state in	1	0
	Soft at centre only in	7	3
	Ditto at upper part ditto . . .	8	4
	Ditto lower part ditto	10	2
	Indurated, firm, tough, and wasted in	16	4
	Lymph on cord in	0	1
	Grey matter unusually pale in	2	2
	A portion disintegrated in . .	1	0

The two following are chronic cases, attended with induration of the spinal cord. In the first (Case VIII.) the disease appeared to have been arrested for a short time by local treatment. In the next cases, X., XI., and XII., the general paralysis came on and ran a rapid course in patients after admission to the asylum, attended with softening, acute inflammation, recent lymph at base of brain and spinal canal, pus in spinal canal in the last case, XII.

CASE VIII. (176).—A cattle drover, aged 39; married; first attack; duration 12 months. Admitted 21st June, 1849, in a state of dementia and general paralysis. Conduct, violent and destructive; conversation

unconnected; ideas wandering; memory and affections enfeebled; propensities destructive. General health bad, pulse 90, tongue clean, skin cool, appetite bad, motion imperfect, expression vacant, hazel irides, black hair, fair complexion. Had medical attendance at home for last twelve months; belongs to a club. A week after admission he was feverish (p. 112), pain felt in dorsal region from the application of a hot sponge; four ounces of blood abstracted by cupping from the spine; blisters were also applied, without benefit. In July a like quantity of blood was taken by cupping from the spine; the tenth of a grain of strychnia in solution; moxa applied to the spine. In August he was slightly better. In September the pulse was 80, and he was improved. The moxa was again applied. In October he walked better. In November he was not so well. In December he had an attack of diarrhœa, which continued, and left him in a most helpless and emaciated state. In January, 1850, he gradually sank and died; autopsy 32 hours after death; weight of body 112lbs; length, 5 feet 9 inches; head, circumference $22\frac{1}{2}$ inches; antero-posterior measurement, 13; transverse, 12 inches. The medullary portion of brain in some places of a peach-colour; the lateral ventricles were distended with fluid, and in the fourth there was a rough appearance as if sand had been sprinkled on it. The right and left cerebral hemispheres each weighed $18\frac{3}{4}$ ounces, the cerebellum 6, pons varolii and medulla oblongata $1\frac{1}{4}$, the latter was unusually firm and small; encephalon $44\frac{3}{4}$. The membranes of the spinal cord were thickened and slightly adherent, by means of recent lymph. The microscopical examination afforded clear evidence of inflammation, the matter of the adhesion differing in no essential respect from that occurring between the pleura or peritoneum after the same disease. Not any exudation corpuscles in the cord itself; which corpuscles were so numerous and distinct in some previous cases. There was about half-an-ounce of fluid in the upper portion of the spinal canal. The upper part of the spinal cord was unusually firm to within about an inch of the cauda equina. The lungs were natural; heart 10 ounces. Abdomen: liver large, 68 ounces, the mucous membranes of the colon and duodenum of a purple colour. In this case the disease appeared to have been arrested for a short time, and afterwards ran rapidly into the third stage of complete helplessness and incoherence.

CASE IX. (823).—A soldier, aged 44; married; first attack; duration, 2 years and upwards. Admitted in a most helpless state; bed-ridden; died a month afterwards. Had been under medical treatment; in a state of dementia; urine passes involuntarily; pulse, 112; tongue, white; bowels, constipated; skin, cool; appetite, good; expression, silly. He had also bed sores on admission. He was placed in the infirmary; his bowels were opened with medicine; he was given the liq. hyd. bichloride, twice daily, and the nape was blistered. Two weeks after admission, pulse 144; he seemed to feel when the

soles of his feet were tickled with a feather; he also feels the electric current, but in a less degree than two other men, one an idiot, and the other under treatment for painter's colic. He gradually sank and died; near the last he had difficulty in swallowing. Autopsy 16 hours after death; weight of the body, 145 lbs.; length, 5 feet 11 inches. Head: circumference, 23 inches; opacity of the arachnoid and fluid on one side, the veins turgid with blood; the brain unusually firm, the left cerebral hemisphere two ounces heavier than the right; encephalon, $43\frac{1}{2}$ ounces. The spinal cord quite indurated, atrophied, containing exudation corpuscles; it weighed one ounce. Chest: old pleuritic adhesions on both sides; congestion of blood in lower lobes of both lungs, and tubercles in the apex of the right; weight of right lung, 30 ounces, left 22; heart, $11\frac{1}{2}$. Abdominal organs natural. Cause of death: chronic inflammation of the brain and spinal cord, and congestion of the lungs.

CASE X. (1405).—A farmer, aged 48, single. First attack, duration twelve months; stubborn, violent, of intemperate habits; hereditary predisposition to insanity; dangerous to others; incoherent and wandering in his ideas; memory still tolerably good, excited; tongue, white; skin, warm on admission. He continued in a noisy, excited state for three months after admission, when his general health began to decline, and he became dirty and destructive in his habits. During the next three months, the paralytic symptoms increased; he became very feeble, requiring stimulants; he was restless, and could not be kept in bed. Twelve months after his admission he died. Autopsy 30 hours after death. Weight of the body, 135 lbs; length, 5 feet 11 inches. Head: circumference, 23 inches; antero-posterior measurement, 11, and transverse, $11\frac{1}{2}$ inches. Opacity of the arachnoid; the lining membrane of ventricles appeared rough; about 4 ounces of fluid in ventricles and base of skull. Brain, large— $51\frac{1}{2}$ ounces. Spinal cord, softened; about $1\frac{1}{2}$ inch of the upper part in a creamy state. Chest: recent lymph on left pleura, which contained three pints of fluid; double pneumonia; right lung, 40; left, 35; heart, large— $12\frac{1}{2}$ ounces. Abdominal organs natural. Cause of death—arachnitis, myelitis, and pleuro pneumonia.

CASE XI. (550).—A female servant, aged 26. Like the last case, the paralytic symptoms came on whilst in the asylum. When first admitted, in March, 1855, her general health was tolerably good. She was then in a state of melancholia; very obstinate and indolent in her habits. Hereditary predisposition on mother's side to insanity. She had been living as a servant in London, and left her place nine months previously; latterly she refused food. She had to be forced to take food for six weeks. She gradually improved, and at the end of seven months was discharged, recovered. Nearly three years afterwards, in

February, 1858, she was re-admitted. She had been violent at home, was very obstinate, sullen, and silent, as before. Pulse, 102; skin, cool; tongue, clean—in good condition. She remained without any change in her mental state for seven years; her general health was good; she worked in the laundry regularly. In January, 1865, her health began to decline; she became dirty in her habits, still dull and silent; she had bark and acid. During 1866 no material change in her habits; appetite good. In January, 1867, she was kept in bed from paralysis. She soon became helpless, and required to be fed. She was ordered phosphate of iron and strychnine. In March she continued to take stimulants and tonics. Three days before her death she spoke to her father and mother, who visited her, and to the attendant, which she had not done for months previously. She died 31st March. Autopsy 30 hours after death. Body, wasted; weight, 77 lbs; length, 5 feet 2 inches. Circumference of head, 22; antero-posterior measurement, 12; transverse, 11 inches. The brain softened at centre; recent lymph on base of brain and throughout the spinal canal, covering the cord; weight of brain, $44\frac{1}{2}$ ounces; spinal cord, large— $1\frac{1}{2}$ ounces. Chest: lungs, natural; heart, small— $6\frac{3}{4}$ ounces. Abdomen: an ulcer and contraction about the centre of the small intestines; a small fibrous tumour in uterus. Cause of death—cerebritis and myelitis.

CASE XII. (1233).—F. P., a widow, aged 39, had one child; had an attack of paralysis affecting the left side four years ago. Her present attack of six months' duration. Has been in a private asylum. Violent and incoherent; in bad health. Pulse, 70; tongue clean, sallow complexion; dirty in her habits; noisy at night; appetite good. Paralysis increased rapidly. She was bedridden; had bed sores, and died four months after admission. Autopsy 19 hours after death. Weight of the body 97 lbs; length 5 feet 2 inches; head—circumference, 21 inches; antero-posterior measurement, 11; transverse, 12 inches. Central softening on the brain, which was dark coloured, and had a slightly offensive odour; the ventricles distended with fluid. Each cerebral hemisphere, $15\frac{3}{4}$ ounces; encephalon $36\frac{3}{4}$ ounces. The spinal canal contained pus, and the centre of cord was covered with pus; about 3 to 4 inches of the upper and lower portions free from pus; cord large, weighed $1\frac{1}{2}$ ounces. There was cadaveric congestion of blood in the lungs. The abdominal organs natural. Cause of death, cerebral softening and myelitis.

The *pulse* in general paralysis is usually above the natural healthy standard. As regards the temperature of the body at different times of the day some doubt exists. For the following observations on those points (*see next page*) I am indebted to Mr. Power, who was acting as the Medical Superintendent of the Somerset County Asylum.

TEMPERATURE OF AXILLA AND FREQUENCY OF PULSE IN SIX CASES OF
GENERAL PARALYSIS IN MALES IN THE SOMERSET COUNTY ASYLUM,
TAKEN AT 11 A.M. AND 11 P.M.

Date.	Name.	Age.	11 a.m.			11 p.m.		
			Temperature of Axilla.	Pulse.	Temperature of Room.	Temperature of Axilla.	Pulse.	Temperature of Room.
1871.	W. P. . .	34				98.1	108	60
April 12th	W. Ch. . .	38	99.1	108	60	99.5	86	55
	P. Cr. . .	32	96.2	84	60	97.2	78	57
	W. S. . .	39				95.2	90	59
	J. C. . .	43				98.2	80	57
	S. J. . .	27				97.7	83	60
April 13th	W. P. . .		98.1	106	61	98.	120	58
	W. Ch. . .		99.2	104	59	99.3	93	58
	P. Cr. . .		96.1	92	64	98.2	88	59
	W. S. . .		96.	108	64	97.2	88	62
	J. C. . .		97.	86	62	99.	90	61
April 14th	S. J. . .		96.4	82	62	98.3	87	56
	W. P. . .		96.4	108	61			
	W. Ch. . .		99.3	92	62	100.4	96	61
	P. Cr. . .		97.4	78	62			
	W. S. . .		96.4	98	62			
April 16th	J. C. . .		96.4	84	61			
	S. J. . .		98.1	90	61			
	W. P. . .		96.3	103	58	97.2	102	60
	W. Ch. . .		101.5	96	61	99.4	102	60
	P. Cr. . .		96.1	76	60	97.3	68	59
April 18th	W. S. . .		96.1	90	60	95.1	78	58
	J. C. . .		96.4	98	60			
	S. J. . .		97.2	94	59	97.	60	61
	W. P. . .		97.2	104	61	98.4	110	63
	W. Ch. . .		97.	100	59	98.4	98	60
April 19th	P. Cr. . .		94.4	90	58	96.	72	61
	W. S. . .		96.2	94	58	95.4	84	67
	F. C. . .		94.6	96	61	95.2	80	60
	S. J. . .		98.1	70	61	97.3	84	61
	W. P. . .		96.2	104	58	96.1	100	55
April 19th	W. Ch. . .		96.4	94	61	95.	108	56
	P. Cr. . .		97.1	80	59	96.	86	54
	W. S. . .		95.	98	59	97.3	86	56
	J. C. . .					96.4	88	60
	S. J. . .		96.2	70	58	97.3	67	56

The second on the list, W. Ch., died three days after the last observation, his death having been preceded by a succession of fits twelve days previously, and increasing in frequency towards the last. At the autopsy, 13 hours after death, Mr. Power found the arachnoid opaque everywhere; vessels of brain much congested; brain firm throughout, in other respects, natural; cerebral ventricles full of colourless fluid; weight of encephalon 46 ounces. The spinal cord soft at middle; elsewhere quite hard, $1\frac{1}{4}$; pneumonia lower lobe left lung; liver fatty; cause of death general paralysis.

On Cramiology. By J. W. EASTWOOD, M.D., Edin., Dinsdale Park Retreat, Darlington.

There are two classes of men who occupy themselves in observations on mental functions, frequently working widely apart from each other. These are, the metaphysicians, who investigate the phenomena of mind apart from anatomical or physiological facts, and the physiologists, who keep as exclusively to their own labours. Neither of these classes of men have as yet formed any philosophical system of the mental powers, and other functions of the brain; and it may be safely asserted that it is only by a combination of metaphysics and physiology that we can advance any considerable steps in our knowledge. The philosophical Reid, whose greatest disciple was Sir William Hamilton, stated many years ago, in his "Essays on the Powers of the Human Mind," that they are "so many, so various, and so connected and complicated in most of their operations, that there never has been any division of them proposed which is not liable to considerable objections." All the classifications made by metaphysicians differ materially from each other, and what was true in Reid's time is true now. We have a different race of metaphysicians from those who flourished years ago, different from Reid, Dugald Stewart, and Brown, but as yet we seem no nearer than we were to a systematic and comprehensive classification of mental faculties, or more properly, of the functions of the brain. I would not say that no progress has been made, for a vast mass of facts has been accumulated, and careful observations have been made, which will be available at some future period for a scientific and philosophical classification.

From a very early period, and especially since mental qualities were believed to reside in the liver, stomach, spleen, or kidneys, the brain has been recognised as the organ of all mental manifestations, and a certain amount of correspondence has been believed to exist between the shape of the cranium, the size of the brain, and the character of the individual. This has been amply proved in reference to large numbers of persons representing different races of mankind, and in the researches connected with this subject, the English and Americans have done more than the Germans and French.

We find the principal races of mankind possessed of skulls

of very varied shapes, but within certain limits these are modifications of three types, the prognathous or Negro, the pyramidal or Mongolian, and the oval or Caucasian. The skulls differ in size, as well as shape, the largest being the more highly developed, the Caucasian; but amongst each race may be found skulls which belong more or less to the other types. These, however, are exceptions, which are found frequently in some nations, in others more rarely. As all the forms of skull may be referred to these three types, the difference of race characteristics dependent upon them is a legitimate argument in favour of there being some close connection between the shape of the skull and cerebral functions. A system of craniology may yet therefore be found which shall embrace these varieties of skull, not only amongst nations, but amongst individuals. No system yet discovered deals satisfactorily with these varieties amongst the crania of mankind. The different modes which have been used for ascertaining the cranial capacity, and the functions of the brain, are as yet of only partial application, and I refer now specially to the measurement of the cranium by Camper's facial angle, and the system of phrenology. The former deals merely with size, the latter endeavours to ascertain from size and external configuration the qualities of individuals.

There are three points that demand our consideration at the outset of an enquiry of this kind.

I. That there is a close correspondence between the size and configuration of the brain, and the size and configuration of the bony envelope. This cannot be doubted either in man or the lower animals, subject, however, to certain modifications as regards the thickness of the skull, the size of the sinuses, and the internal bony projections.

II. That the general size of the brain is the measure of the general power of the mind. This statement, relied upon by phrenologists, but not exclusively belonging to them, can scarcely be denied, yet it has caused much controversy, as there are so many modifying circumstances in connection with it. The reference to the principal varieties of mankind proves its general truth, for the lower races have the smallest amount of brain, and the Caucasian the largest. And yet amongst the negro tribes there are some that are scarcely behind some European nations. Livingstone found the Makololo and the Londa people with good heads, of fair size, and of almost oval shape. We can scarcely doubt that these

people are capable of attaining a higher degree of civilization than the more typical negroes of the Coast of Guinea, and that they only require favourable circumstances to become superior to their brethren of the same race. On the other hand, the Irish of Ulster were driven, in 1641 and 1689, from Armagh and South Down into Connaught, and their descendants are not equal to their countrymen. They are only 5 feet 2 inches in height, they have become more prognathous, and are amongst the lowest of the Irish people, for deficient food and isolation have caused great deterioration. By Camper's facial angle, the orang outang measures 30° , the chimpanzee 35° , the Australians and Negroes 64° to 70° , whilst the higher races measure 70° to 85° . The cranial capacity of various races and nations, measured more correctly by the empty skull being filled with shot corns, shows the relative order to be as follows, beginning with the lowest:—Australians, Polynesians, Hottentots, Peruvians, Mexicans, American Indians in general, American Negroes, Malays, African Negroes, Indians or Hindoos, Parisians of the 12th century, Parisians of the 19th century, Anglo-Americans, Parisians of the present day, Germans, English. These measurements show that in the case of the Parisians, there is an increase of skull owing to civilization, and this statement is no doubt true generally. Dr. Thurnam has examined many brains, and has found the average size greater in educated people than in others, in proportion to the size of the body.

The question of size being the measure of power is more complicated than *a priori* it would appear, as it is liable to so many exceptions. Some great men have had very large heads, as Cuvier, Schiller, Sir Walter Scott, but, on the other hand, other great men have not had great heads. Napoleon I. is often mentioned as an instance of a large-headed man, but it is a fact that the hats of some of his soldiers would go right over his head, and yet he was unquestionably the greatest man in France, and exercised a tremendous brain-power over others. Byron and Tiedemann had small heads. The expression, "a good head, a capital head," frequently heard, does not always refer to the exploits of the individual, but to the size and shape, and the common people often draw their inferences as to the intellectual capacity of a person from the size and shape of the skull. On the other hand, a man with a large head is often called a "thick-head," just as a big man is often called "a great good-for-nothing." The largest-headed man whom I know has never been much more than a

learned imbecile. The average of men is considerably greater than that of women, the weight of brain being $49\frac{1}{2}$ oz., and 44 oz. Temperament and size of body are important elements to be considered. In persons of phlegmatic temperament, there is often not only a large body, but a large brain, with slow functions. In individuals of the sanguine and nervous temperaments, a small body and a small brain often go together, with great mental and bodily activity. The relative weight of brain to that of the body is a more correct standard of measurement than the absolute weight, which is greater in man than in most animals. The relative weight is, however, less than in some song birds, and in American monkeys.

In this estimate of size it is necessary to bear in mind that there is an original and an educated intelligence. Shape of skull may give us some idea of the former, but it cannot tell us much of the latter, unless it be later in life. Parchappe says the cranium increases up to the 50th year, and considerably diminishes after the 60th. Many experiments show that the skull is increased in size by education. In my own case the frontal region especially has become fuller, as ascertained by a correct cast of the head taken 20 years ago. On the occasion of my graduation in Edinburgh, I was much struck by the difference between the professors of the University and the men of business who were bailies of the city, and who were present as patrons of the University. Original choice or profession may partly account for this difference. As races of men undergo certain progressive changes, so may individuals. It is chiefly the height of the skull, and the development of the frontal region, which are affected thereby, and by which the internal capacity of the cranium is increased.

In races capable of civilization, the anterior sutures remain open longer, and are obliterated at a later period than the posterior. The reverse is true in races of lower character, and this would explain, so far, the stoppage of development in the negro at or about puberty, until which time he is as forward as the white boy. We have the best evidence in the change produced in the course of centuries, by education, in the Parisian skulls, which have been obtained from the catacombs and carefully examined. In the cave and stone periods of European life, skulls have had foreheads, and approach the lower races in character. It is remarked by Carl Vogt, that "there can be no doubt but the prosperous and wealthy classes of human society are, on the whole, physically finer and stronger than the lowest classes, who are much exposed

to misery and want. It is further unquestionable that those classes which, in successive generations, follow mental occupations, possess a greater development of the skull than the ignorant masses who are engaged in the meanest occupations." A statement counter to this may be made that the prosperous classes are apt to become effete, without newer blood drawn from a lower stratum of society, and that famous fathers rarely have famous sons. There are exceptions to this in families noted for hereditary ability, as the Stanleys, Cecils, and others. Culture, wealth, aliment, and particular occupations, however, improve a race generally, whilst hunger, anxiety, war, and oppression deteriorate it; so that the characters are transmitted through successive generations. The Irish of Ulster have been already mentioned, and some of the American Indians have evidently fallen much below their former position.

Amongst men who distinguish themselves, the difference from others is not so much in capacity of brain, as in taste or inclination; so that perseverance will succeed without the existence of great talent. This proves that quality of brain is of as much importance as size. There is less mental activity in the lower classes, and the movements of the body are slower than in the educated classes.

III. The third point for consideration is, that there are organs of the brain corresponding to the various cerebral functions. Our knowledge on this subject is at present very unsatisfactory. Lord Bacon said, "There should be an enquiry of the seats and domiciles which the several faculties of the mind do occupy in the body and the organs thereof." When the great philosopher wrote this, he was under the belief that faculties of the mind resided elsewhere than in the brain; but we have only to make this alteration, and his words may be applied to the present time.

The most obvious division of the cerebral mass is into two hemispheres, and each of these into three lobes, corresponding to the frontal, parietal, and occipal bones or vertebræ. These lobes may be said to represent the three great races, who have been called the men of the day, the Caucasians; men of the twilight, the Mongolians; and the men of the night, or the Negroes. There is some apparent physical reason for this, for the frontal lobe is the most developed amongst the higher races of men, and it is generally accepted as being the particular seat of the intellectual faculties. The correspondence is not so obvious in the other instances. Aristotle

thought the anterior lobes were for common sense, the middle for judgment and reflection, and the posterior for memory. The dual character of the brain renders it like most of the other organs of the body, and affords an explanation of some remarkable mental phenomena, into which I cannot enter. The three-fold division of each hemisphere corresponds to the division of the phrenologists into intellect, moral faculties, and the propensities. If this could be satisfactorily established, it would be a great step in advance. From the fact that the senses of sight, hearing, taste, and smell, can be accurately localised in the brain, we are warranted in concluding that other portions of the cerebral mass have also special functions. No great success has hitherto attended the efforts made for the localization of organs, and neither slicing the brain in the lower animals, nor wounds of the brain in man, nor morbid conditions, have thrown much light upon the subject. The attempt to fix the organ of speech in the third convolution of the left anterior lobe has failed, after the examination of many cases of disease. The convolutions of the brain vary much in shape and size, and are probably the seats of different functions. They contain more or less grey matter, which seems to be the originating substance, with some white matter, which is the connecting tissue. The convolutions differ from each other in depth of grey matter, and therefore a small compact brain may contain a large amount of it. The superficial grey substance is probably connected with mental activity, and the deeper seated portion with sensation; therefore, the more convolutions, and the deeper they are, the more intellect. Sir James Y. Simpson had a large brain and fine convolutions. Wagner found a complex arrangement of fibres in the brains of some eminent men. Marshall says the brain of a bushwoman which he examined had fewer and more rudimentary convolutions than the brain of a European. In the lower animals the convolutions are generally less complex than they become as we ascend the scale. The convolutions on the outer or convex surface of the hemispheres, attain their highest developement in man, and are peculiarly characteristic of the human brain.

Phrenology.—No definite system of craniology has been put forward, except the one discovered by Gall and Spurzheim, and since modified by other observers. Notwithstanding the neglect into which phrenology has fallen, it is worthy of some consideration; and of late, many things have been done to show that it is not true, whilst no efforts have been made to

follow in the same direction, and ascertain from the external configuration of the skull what information can be gained thereby. That size is a measure of power under certain conditions, is generally allowed ; and that there are special organs and functions, is admitted to be more than probable by Dr. Carpenter. These views are the basis of phrenology, and must be almost necessarily the basis of any system of craniology. The localization of organs is also rendered probable by the existence of partial insanity, when it cannot be said that the whole brain is diseased. The objections to phrenology are that it is theoretically too perfect a system, appropriating the surface of the brain to the different faculties, and leaving the unknown central portions without any functions. This will always be a difficulty ; but instead of adapting the system to this difficulty, phrenology has passed over it, as there are no organs left to be distributed over the central grey masses. Comparative anatomy and physiology are in opposition to phrenology, for the posterior lobe, said to be the seat of the animal propensities, is last developed, and attains its greatest developement in man and the higher animals.

With respect to the cerebellum, it is probable that phrenology is partially true, which is admitted by Carpenter, and that whilst the middle lobe or vermiform process is the seat of sexual feeling, the other lobes are connected with muscular movements. It would be well if our asylum physicians would use their large opportunities, and make careful observations on this subject, after the manner of Dr. Lauder Lindsay, who has examined a number of patients, with a view to test the truth of phrenology, and to see if it would throw any light on our knowledge of insanity. He has come to the conclusion that, "while there is apparently much truth in phrenology, especially in regard to some of its general laws or doctrines, there is unquestionably more error."

My own experience is, that some of the organs are very correctly localized ; and I would specially mention the perceptive organs generally, but not in detail ; the reflective organs of comparison and causality, and the moral faculties of firmness, self-esteem, love of approbation, and cautiousness. Some years ago I had an excellent opportunity of testing the practical value of phrenology as a means of judging character. A most intelligent and earnest phrenologist examined the heads of a number of friends and acquaintances of my own, and I have notes of twenty-one of these cases, consist-

ing of medical men, clergymen, and other professional persons, ladies and children. In no instance had the operator ever before seen the individuals examined, and as I knew them so well, he appealed to me to correct him where he was wrong. I can only say that the descriptions were so accurate as to afford striking evidence of the truth of phrenology. By limiting and modifying its extreme pretensions, it is possible yet to gain something from it, whereby a true system of craniology may be evolved. It will require many observers to succeed in it, and much careful observation is needed, but the result will repay the labour of those who engage in the work. If we are enabled by these means to understand the morbid manifestations of the brain, for the classification of its diseases, and for the diagnosis of insanity, we shall render great service to the special branch of the profession in which we are engaged.

Observations on the President's Address, 1871. By G.
FIELDING BLANDFORD, M.D.

An engagement prevented my reaching the meeting at the College of Physicians, on the third of August, in time to hear the President's address, and though I had something to say on the subjects contained therein, I had not the presumption to offer a criticism without having heard it, while the discussion which followed did not enable me to gather what had been put forward. By the kindness of Dr. Maudsley, however, I have been permitted to read his remarks, and have found them in every way worthy of the high encomiums passed upon them by more than one speaker; yet one or two observations occur to me. Dr. Maudsley is fond of paradoxes, and he startles us with one at the commencement. He tells us that he is convinced of the important part which hereditary predisposition plays in the causation of insanity—that he thinks no person goes mad, save from palpable physical causes, who does not show more or less plainly by his gait, manner, gestures, habits of thought, feeling and actions, that he is predestined to go mad. And yet when he is discussing the advice to be given as to the marriage of people sprung of insane ancestors, he sums up his opinion in these words—"I cannot think science yet has the right to forbid marriage to those in whom some tendency to insanity exists."

Dr. Maudsley puts forward his reasons for coming to this opinion, and reminds us of the difficulty of estimating the degree of the ancestral taint, of the probability that of the descendants of the marriage, some only will become insane, while from among the others there may very likely arise a genius. He tells us that much genius exists in individuals, who are descended from families tainted with insanity, and in his admiration for genius, he says—"If one man of genius were produced at the cost of one thousand, nay, at the cost of fifty thousand insane persons, the result might be a sufficient compensation for the terrible cost." Whether the genius of England was less when there were fewer lunatics, whether it is transcendently great now that there is one lunatic in every 400 persons, is a question which cannot here be discussed or decided. Dr. Maudsley seems to do that which in his next section he deprecates: speaking of those who have actually been insane, and whose marriage may become a matter for inquiry, he says that he would prefer to consider each case on its merits, and again, "one may justly use the strongest words of dissuasion to restrain a person who has once been insane from marrying; but how much farther than that one is justified in going does not seem at all clear." We are, however, not only physiologists, but also physicians. We have to judge *all* cases on their merits, and cannot possibly draw a hard and fast line for or against the marriage of those who have insane relatives, or have been themselves insane. But we are not only consulted by such individuals themselves; our advice is also sought by those who contemplate entering into an alliance with them, or by their relatives. After all it is only advice that we can give—advice that may be followed or not, and very frequently is not, so that going farther than this seems hardly possible. But in giving our advice to those who question us upon either of these cases, surely, as practical physicians, we should take a rash step, both for ourselves and our questioners, were we to deliberately advise a girl to marry a man who may possibly have five or six brothers or sisters, all of whom are, or have been, insane. The chances of the offspring are only one element out of many. It may console a woman to have one son a genius, even if others are insane or idiots, but her husband may himself go mad, and she or he may meet with any of the innumerable accidents which spring from such a state, or his insanity may bring her and the family to pauperism. Dr. Maudsley challenges a statement of mine to the

effect that a man with an insane brother is more liable to become insane than one with an insane sister. It is almost a corollary of a statement which is given in his own book as well as others, and was, I believe, first made by Esquirol and then by Baillarger, viz. :—that insanity descends from the mother to the daughters, from the father to the sons. Not that we are to understand by this that it is rare to find insanity coming from a mother to a son, or from a father to a daughter, but that in a large number of cases, more sons will be affected by the father's insanity, more daughters by the mother's; in other words, that the males of a family resemble one another in their mental characteristics, as also the females. And this I have found to be borne out by cases which have come under my own observation. But it is not a rule applicable to every family; it is only a law affecting the majority in a large number of instances. With what Dr. Maudsley says concerning the prevention of insanity in an individual most will agree. Before, however, such a one can command himself, and direct his own will to check and control his morbid propensities, he must be educated by others; his training must be gradual, and must commence with his early years. But we read "one of the saddest things in the world to witness is the way in which children, born with the evil inheritance of a taint of insanity are frequently mismanaged; those who have the care of them and the direction of their education being often the least fitted to exercise so responsible a function. The children are twice cursed; they are cursed in the inheritance of a bad descent and in the training they get, or rather the want of training from which they suffer, in consequence of parental peculiarities and defects." Such is the lot, faithfully depicted, of the children of insane or semi-insane parents, of those who have by inheritance a taint of insanity. Truly, for one genius that manages to struggle upwards to enrich the world, there must be thousands even of geniuses, that are nipped in the bud beneath the frosts of such a culture. Said I not right that our President loves paradoxes?

In the second section of the address there are some remarks on the treatment of the insane in private houses, which are worthy of the attention of all who practise in this specialty. Every speaker to whom I listened in that portion of the discussion during which I was present, disagreed with Dr. Maudsley on this point, though what the latter had said I could by no means gather from the debate. Almost all ques-

tioned whether patients could be treated at home as well as in an asylum, and implied that home-treatment had been recommended. Now, although home treatment—*i.e.*, treatment in the patient's own home, is not specially condemned, it is perfectly obvious that this is not what is advocated. I would alter what Dr. Maudsley has said to this extent: insane patients, with some exceptions, when in a recent and acute stage of their disease, require treatment outside of their own homes, in a house which may truly be called an "asylum," whether it is an asylum for one—as may now be, and constantly is, contrived—or for two or three, as Dr. Maudsley would wish to see established. Asylums, as we see them at present, are the accidents of existing circumstances. A patient, if he is a rich man and can command an entire house, suitable companions, and first-class attendants, goes to an asylum for one. If he is not quite so well off, he goes to an asylum for twenty or thirty patients: are his means insufficient for the latter, an institution for one hundred or two hundred inmates opens its doors to him; while, if he is a pauper, he forms a fraction of a mass amounting, it may be, to a thousand. But neither of these systems is home treatment, such as is represented to be the alternative of asylum treatment by the advocates of the latter.

No one, I should think, ever treated more lunatics in private houses than the late Dr. Sutherland, and he stated before the Committee of the House of Commons that the recoveries of such patients were 74 per cent. Of course it was said that these were selected cases; but whether they were or not, it must be conceded that selected cases will recover in this proportion under such a method; whereas, the advocates of asylums deny that cases can be well treated anywhere, save in these privileged abodes. It is clear, however, that comparatively few can speak with any degree of experience of patients treated in this way. Many of the most distinguished of the superintendents of our public asylums can have had but few opportunities of observing such, and they may naturally distrust a system of which they know nothing, and which is from one motive or other almost universally decried. I myself could add other instances to those recorded by Dr. Maudsley, and I have in the Fifth Series of the St. George's Hospital Reports mentioned three cases of recurrent insanity of apparently the most hopeless character, where the patients all recovered through change of scene and surroundings, two of them having been first of all removed to other asylums, from

which they were, however, shortly released. Whether there will be a return at any time of their disorder, one cannot predict, but it is certain that at a time when their condition appeared to be fast becoming one of incurable and chronic insanity, the change, which was in more than one case the result of convenience rather than a mode of treatment, effected a revolution, and taught a lesson never to be forgotten. It is not, however, the placing of patients recently attacked with insanity in asylums which calls most for censure, but, rather, the perpetual confinement in them; of the hundreds of lunatics supposed to be incurably insane, but who are quite capable of living, under care, beyond asylum precincts. Upon this subject, however, Dr. Maudsley does not enter, neither have I the right to do so.

In his remarks upon sedatives, our President is also somewhat paradoxical, for in some passages he seems to mistrust them altogether, and to question whether any benefit is to be derived from them; in others, he admits that he himself uses them, and that successfully. He says "everybody gives them, because there is mental excitement." In my published lectures, the various drugs mentioned as sedatives are mentioned in connection with the question of sleep, not the stifling of excitement. With few exceptions they should be given at night, and at night only; but now and then a case may be seen where it is a question of sleep or death for the patient,—and then we must try to bring about sleep, whether by night or day, for we cannot wait twenty-four hours till night comes round again, when this period of time may make the difference of living or sinking to the delirious sufferer. It is true that these very acute cases are pre-eminently those in which sedatives are most apt to fail. Formerly such patients were treated with opium and morphia, which, in the majority of instances, I venture to say, did harm rather than good. Next bromide of potassium was brought to bear upon them, and the effect of this was not great; for bromide is not directly a sleep-compelling agent, though it often causes drowsiness in those that take it. Now-a-days chloral would be almost certainly administered by most medical men.

Dr. Maudsley speaks disparagingly of chloral, and elsewhere we read of deaths and untoward symptoms brought about by its administration. Whether the samples of the drug vary considerably, or whether its too frequent administration may lead to unpleasant results, I know not, but in the course of a tolerably large administration of it to very many

patients, I can affirm that I have never had five minutes' uneasiness on account of any dose I have ever ordered, and beyond all question its power of producing sleep, both in acute and chronic insanity, exceeds anything that would have been believed ten years ago. We cannot refrain from attempting, at any rate, to procure sleep in these extreme cases of sleepless delirium. If drugs are of no avail, especially chloral, we may trust to other measures, but we can hardly stand by and see this sleepless delirium day after day without trying to do something to arrest it. I believe that here chloral, judiciously given, does not act as a poison, like morphia, and that we may, at any rate, give it a trial without fear. In my lectures I say "I have never seen a cold bath given, but I should like to see the effect of placing a patient in a tepid bath, and allowing him to remain there till the water cooled." Since this was written we have seen Dr. Wilson Fox's account of the treatment of acute disease—acute rheumatism—by means of cold baths, and of the way in which patients were snatched out of an almost moribund condition by this method. In these days of thermometers, when the temperature can be so carefully noted, I wish that those who practice amidst the numerous patients, and are provided with the various appliances of our large asylums, would give this treatment a trial. Not only when it is a question of life and death is it important to procure sleep by means of sedatives; many patients suffering from less acute forms of insanity, as melancholia, or the milder forms of mania, will benefit by the sleep brought about by drugs. Where without them they will sleep two or three hours on an average, we may, by their aid, ensure six or seven hours, and this cannot fail to tell upon the condition of the brain.

These are matters, however, that speak very much for themselves. Doubtless Dr. Maudsley gives medicines a trial before he throws them aside. To do both the one and the other at the proper time is the sure way to success. He put forward these subjects to elicit discussion, and in that he succeeded fully, and the result was a meeting of unusual interest. Both those that heard and those that read his address must feel that some new views upon old questions have been put before them in a way which cannot fail to call for their warmest respect and most serious consideration.

OCCASIONAL NOTES OF THE QUARTER.

General Paralysis of the Insane.

Dr. Wilks has addressed the following letter to the *Lancet*, in reference to a criticism which appeared in the last number of the *Journal of Mental Science*:—

SIR,—In the current number of the *Journal of Mental Science* my friend Dr. Mackenzie Bacon, of the Cambridge Asylum, takes exception to some remarks made by me in the last volume of the "Guy's Hospital Reports," on the expression "general paralysis of the insane," and as the pages of neither work are open to controversy, you will, perhaps, allow me to restate my case in a few words. I take objection to the term since I am daily brought in antagonism with it, but of course do not for a moment ignore the existence of so characteristic a disease as that which alienists are pleased to call by this name. Dr. Bacon's brief description of it is excellent, but by no means removes my difficulty. I maintain that the use of so general a term as "paralysis of the insane," or "dementia paralytica," is essentially bad, as I and my pupils know to our cost, when we have before us a paralysed patient whose mind is affected, and we are excluded from adopting an expression which its simple meaning would suggest as strictly appropriate, because it has already been restricted to a narrower sense by the alienists. The term *dementia paralytica*, in its obvious meaning, is applicable to other cases than the peculiar disease known as general paralysis of the insane. Suppose, as an analogous instance, we have a dozen diseases of the kidney, which, leading to its destruction, terminate in a suppression of the healthy urine, and to this condition the term *ischuria* is applicable; would it not be of great disadvantage to employ a term of such general meaning to one particular form of disease, marked during its progress by peculiar symptoms; would it not tend to confound such different diseases as granular degeneration and suppurative nephritis? So in the nervous system, if the brain and spinal cord degenerate, both body and mind become weakened, and a *dementia paralytica* results. But the symptoms vary in the course of the disease, according to the causes and mode of degeneration; one kind of change in the cortical structure, leading to degeneration, might be accompanied by melancholia, and another kind of change, leading equally to degeneration, might be associated with an exaltation of ideas, and yet the term general paralysis of the insane ought to be strictly applicable to both. What I require of the alienist, therefore, is to apply to the disease which he treats a more specific name. If he acknowledges a strictly pathological condition, he may style it *periocephalo-meningitis*; if he would rather adopt a clinical nomenclature,

then he might call it "paralysie ambitieuse;" and the latter I think he would prefer, for I have observed, as a matter of practice, that the mental phenomena alone are quite sufficient for its recognition, whilst without these very few physicians will venture upon a diagnosis, even if markedly universal paralytic symptoms are present. I am entirely precluded from the use of the expression "general paralysis," although my patients have a general loss of power, because the term is already appropriated in an exclusive manner; and if these patients are also mad, I must not say that they have general paralysis of the insane, because a peculiar form of insanity is always intended. I think we general physicians have a perfect right to the use of "insanity" and "paralysis" in their common and obvious meaning, whilst it is the duty of the specialist to adopt a name more strictly applicable to the form of disease which he is considering. Can he not make a good English counterpart to "paralysie ambitieuse?"

I am, sir, your obedient servant,

SAMUEL WILKS.

It appears to us, after reading these remarks, that there is much justice in them. At the same time the term general paralysis, though "bad enough," as Dr. Bacon admits, has become so restricted by usage to a particular form of disease that it will probably be found a hard matter to widen its meaning. A similar objection might be brought against the use of the term insanity in its common acceptation, for insanity in its true sense does not mean madness—means only unsoundness, which might, of course, be either of body or mind. Dr. Wilks might, therefore, complain that he was precluded from the use of the term insanity, because it has been wrongly appropriated in an exclusive manner, and might call upon the alienist to adopt a name more strictly applicable, or at any rate always to speak of *insanity of mind*, when he meant madness. But if we were to go through the English language, making reforms of this kind, there would be no end of our labours; in its development it is well understood that usage establishes a right; and the only question in regard of the use of the term general paralysis will be whether Dr. Wilks has made his protest in time to prevent the right which usage gives. We should be glad to have another term, only the difficulty is to fix upon a suitable one. *Dementia paralytica* is, we think, seldom used in English asylums as strictly synonymous with general paralysis; it is used rather to denote—what its name implies—fatuity with gradually increasing paralysis, without ambitious delirium; used in fact as Dr. Wilks would have it used. We recognize in practice at least three sorts of general paralysis of the insane: that form in which there is gradually increasing stupidity and

paralysis, and which would justly be described as *dementia paralytica*; secondly, that form in which, instead of ambitious delusions and exaltation, there are deep melancholic depression and corresponding delusions with gradually increasing paralysis, and which might be called *melancholia paralytica*; and, thirdly, the commonly known form in which there are delusions of exaltation with paralysis, and which might properly be called *mania paralytica*. It is to this last form that the suggested counterpart of the French term "*paralysie ambitieuse*" would alone be applicable—the form which was first described as general paralysis of the insane, and to which Dr. Bacon would apparently continue to restrict it. Dr. Wilks does not fail to acknowledge the existence of this characteristic variety of disease; on the contrary, he quite recognizes the disease, but requires of the alienists that they no longer call it by a generic term which includes it and other diseases that are not it, and that they give it a specific name. We confess to a sympathy with Dr. Wilks in this wish, and to a hope that the application of the term may be widened, so that its meaning in fact may correspond with its meaning in words. If this be done, it will be necessary not to lose sight of the fact that although these three forms of general paralysis of the insane occur separately in different patients, they may occur in the same patient as different phases of the disease. A person who begins with *mania paralytica* sometimes ends in *dementia paralytica*, and remains in that state for some time before death. And at the present time we have, under occasional observation, a patient who, about four years ago, was attacked with all the characteristic symptoms of the exalted form of general paralysis. He was sent to an asylum, where he remained for several months, improving so much, that he seemed recovered and was discharged; no doubt was felt, however, that his improvement was but an abeyance of the disease, and not actual recovery. Three months after leaving the asylum he broke down again, but he was not at all exalted this time; on the contrary, he was miserably depressed, thought he had a frightful disease, would not take food, believing that he could not swallow it, and that it would not nourish him, and could hardly be got to move. So he remains now. When he was first attacked, it was thought he would not live more than two years, but four years have passed, and yet he seems no more likely to die soon than he did at the beginning of his illness. It is an interesting case, as showing how completely one form of general paralysis may be replaced by another. Those who would limit the

name to the ambitious or exalted form of the disease would find some difficulty in naming his present condition; though they might, of course, point to the first symptoms of exaltation as confirmatory of their view, and get rid of the difficulty in that way.

Medical Certificates of Insanity.

In the Annual Report of the Surrey County Asylum, at Brookwood, for the year 1870, Dr. Brushfield remarks upon the frequent trouble occasioned by defects in the filling up of the statutory forms and the medical certificates under which patients are received. The latter, which is in every respect the more important, is, he points out, due to the unsatisfactory character of the present legal form required. We have pleasure in quoting at length what he says:—

The admission paper consists of three parts—the “Order for Reception,” signed by a magistrate; the “Statement,” to be filled up and signed by the relieving officer; and the “Medical Certificate.” In the “Statement,” the relieving officer has to supply the following information:—

Duration of existing attack.

Supposed cause.

Whether subject to epilepsy.

Whether suicidal.

Whether dangerous to others.

Now it is very evident that these particulars ought to fall to the province of the medical practitioner to answer and to embody in his certificate, and although he may require to be assisted in this respect by the relieving officer, yet whether the entries be matters of fact or of opinion, they are essentially of a medical nature. Under the present legal form the replies to these important questions are too often erroneous, and calculated to mislead those who have the subsequent care of the case, and not unfrequently are directly opposed to the facts contained in the medical certificate. Again, this certificate should include all particulars of a medical nature necessary for the medical officers of the Asylum to be supplied with, and should therefore be complete and exhaustive. For this purpose it would be advantageous to arrange the information in a tabulated form, under a variety of headings, on a similar plan to those of the “Statement,” although somewhat more elaborated, and this would aid the medical man in stating his facts upon which he based his opinion of the patient’s mental malady. At present the medical certifier has, under the heading of “Facts indicating insanity” observed by himself, to make entries without having any kind of guide to assist him in selecting and

arranging his facts, so that certificates too often contain a mass of crude statements which in many cases are of no moment, or do not relate to the mental impairment, whilst on the other hand symptoms of the utmost importance are altogether omitted. The following samples will suffice to illustrate the foregoing remarks :—

J. R. C., for three months the inmate of a workhouse ; was admitted with suicidal melancholia. The statement, as signed by the relieving officer, affirmed him to be not suicidal, whilst the symptoms, as detailed in the medical certificate, were to the contrary effect. In the admission room, and in the presence of the person who brought him, he threatened to commit self-destruction, and a few days subsequently made a most determined attempt to effect his purpose. This patient was not brought until eight days after the date of the medical certificate (April 1st), and accordingly, as this was beyond the period allowed by the law he was not received, and had to be taken back to the workhouse. He was admitted three days afterwards with new certificates.

S. S., suffering from chronic mania when admitted. The whole of the “Facts indicating insanity,” as observed by the medical man, were thus reported by him :—“On Monday last I heard S. S. making a great noise and shouting at the top of her voice about the treatment she had received in the workhouse. She was in a most excited state and made a great disturbance ; to-day she is quiet, and has answered my questions fairly but not always correctly.” Now none of these “facts” were at all inconsistent with the patient being perfectly sane. Examination of her case soon proved that her mind was considerably impaired. She had hallucinations of hearing, was the subject of fancied provocation, made groundless complaints, declared she could get no food, and when any was placed before her refused to partake of it, and shortly afterwards again affirmed she was unable to obtain any, and was unable to give a coherent account of her history, etc. ; all of which were good “facts” as testifying to her insanity, and were sufficiently explanatory of her occasional noisy excitement—a symptom of minor importance in comparison with those already mentioned.

Attendants on the Insane.

In the same Report Dr. Brushfield points out the difficulties of procuring the services of good and efficient persons to fill the vacancies that occur in the staff of attendants. He says :—

It would naturally be thought that those who had gained experience in other similar institutions of the same nature of the required duties to be performed would be most fit and proper for appointment ; but in practice so large a section of this class fail to give satisfaction, that in selecting candidates a preference is commonly given to those who have

not had previous experience of asylum duties. In too many instances, notwithstanding the outward display of cleanliness, smartness, and attention to duties, of this class of professional attendants in the presence of officers, there is soon evidence of an undercurrent of uneasiness; and although the patients may make no complaint, it is felt that they do not receive the proper amount of attention they ought to do. Moreover, by introducing objectionable habits and practices from other asylums, they are apt to create a feeling of dissatisfaction, and to induce much mischief amongst the well-disposed of the other attendants, and so add materially to the anxious labours of the officers. By the Lunacy Act, the dismissal or forced resignation of an attendant for misconduct of any kind is, required to be reported to the Commissioners in Lunacy, in order "by means of a central register, available for general reference, to prevent improper persons from being employed in the care of the insane;" (8th Report of the Commissioners in Lunacy, pp. 63-4) but this object has been completely frustrated in practice, and the experience of other medical superintendents, as well as of mine, testifies to the fact that attendants, after being discharged for misconduct of any kind, have hitherto had but little trouble in being engaged in other asylums.* Now, if it were made obligatory for the names of all attendants and servants entering or leaving the service of an asylum, together with such other information as might be thought desirable to be sent to the Office of the Commissioners in Lunacy, an accurate and complete register would be established, and would be of material benefit to all having charge of Lunatic Asylums. Such a record would afford the Commissioners a better opportunity of ascertaining the changes that occurred in the staff of any asylum; it would prevent the engagement of anyone who had been discharged for misconduct; of those who, after a probationary period, had been found inefficient; and of those who are in the persistent habit of leaving their places "for a change." Under any circumstances the patients would be the gainers.

Many Superintendents will, we think, endorse Dr. Brushfield's opinion regarding attendants who have been in other asylums, and agree with his experience that those who have not been in other asylums, do, after the necessary training, make the best attendants; but, with all deference to so experienced a Superintendent, it may be doubted whether his suggestion of a complete registration at the Office of the Commissioners in Lunacy would meet all the difficulties of the case. We doubt whether it would be desirable to impose upon those who have the care of insane patients, the burden

* "We have reason to believe that attendants obtain employment who, if due enquiries were made, would be ascertained to have been dismissed for misconduct from previous situations. In all cases of doubt, application should be made to this office for information, which would be readily furnished."—(17th Report of Commissioners in Lunacy, p. 38.)

of sending to the Lunacy Office the name of every attendant they engage and every attendant they discharge, nor would it seem desirable for the Commissioners to undertake such a registration. Insane patients are not, nor should they be, patients of the State, though the State properly makes provision for an efficient supervision of their condition while under care and control. The power of freely engaging and discharging his own servants should certainly be left unfettered to the Superintendent, who is responsible for their conduct, just as the medical treatment is left entirely to him; for in any way to hamper him in the exercise of that power, as the obligation suggested could not fail to do, would be in an equal degree to diminish his responsibility. In the case of patients in private houses, again, the obligation of such a return would put another serious hindrance in the way of the successful treatment of recent insanity. Already the statutory forms to be complied with are so formidable as frequently to frighten the patient's friends from adopting proper measures for bringing about his recovery by sending him from among them; they keep him at home, to his own detriment, rather than comply with the forms; and medical men, wishful to do the best for their patient and to obey the law, are grievously harassed by the rigidity and inelasticity of a system which, adapted to chronic cases of insanity and asylums, works badly in its application to recent insanity under treatment in private houses. Moreover, what is wanted is not a complete register of engaged and discharged attendants only, but an office to which superintendents might make application when they were in need of attendants. It is not only required to prevent improper persons from being employed in the care of the insane, but it is required to obtain the services of proper persons for the trying and responsible duties which attendants have to perform. A good organization to secure these two great ends, would assuredly do more to promote the welfare of the insane than many more ambitious schemes.*

* The plan followed in Scotland is thus alluded to in the last report of the Scotch Board:—"With the view of eliminating from the ranks of attendants all persons discharged from asylums for any grave fault, we require that all engagements and discharges shall be reported to us in order that we may take measures to prevent the re-engagement in another asylum of any one who has been found unsuitable. By this means we hope to render the re-engagement in a similar capacity, of discharged attendants a matter of some difficulty, and so to afford greater inducements to steadiness and good behaviour. During the past year, two attendants who had concealed the fact of having been previously in asylum service were immediately discharged on the receipt of intimation to this effect from the Board. We cannot, however, expect to reap the full benefits of this practice until the emoluments of attendants are made such as to render their discharge a much more sensible punishment than it is at present."

PART II.—REVIEWS.

Twenty-fifth Report of the Commissioners in Lunacy to the Lord Chancellor, 1871.

Thirteenth Annual Report of the General Board of Commissioners in Lunacy for Scotland, 1871.

The English Lunacy Blue Book this year is unusually bulky and costly, but its size is, perhaps, hardly a measure of its interest. It is, however, a great improvement on some of previous years, and shows that pains have been taken to analyse the mass of information furnished to the Commissioners, and to present the public with something more than a dry official statement of facts.

There are some three or four new tables, showing the distribution of the pauper lunatics, their ratio to the pauperism of the country, and where they are maintained in the various counties. Investigations of this sort are valuable in themselves and more interesting than a detailed account of the official disputes and censures of the year.

The numbers of insane persons in England and Wales, on Jan. 1st, 1871, are given as 56,755, an increase of 2,042 since the previous year. Of these, 28,979 were in County and Borough asylums; 2,390 in hospitals; 4,688 in licensed houses; 354 in naval and military hospitals; 460 at Broadmoor; 392 as single patients; 12,161 in Workhouses; and 7,331 as out-door paupers.

The tables given reiterate the old story of the increasing number of the insane. The ratio per 1,000 to the population is given as 2.49, the highest number yet reached, a fact which still awaits a proper explanation.

Tables X., XI., and XII. contain some curious illustrations of the close relations of lunacy and pauperism, and in those counties with the highest ratio of lunatics to the population may be traced the higher per centage of pauper lunatics to paupers. Some of the counties, with the most lunatics to the population, are the following:—Flint, Hereford, Gloucester, Carmarthen, Berks, Bucks, Dorset, Leicester, Oxford, Wilts, and Worcester.

Of those with a high per centage of pauper lunatics to paupers, the following are the most prominent:—

Flint	-	-	-	-	7.03
Derby	-	-	-	-	6.39
Salop	-	-	-	-	6.43
Warwick	-	-	-	-	6.53
Leicester	-	-	-	-	6.30
Hereford	-	-	-	-	6.22
Chester	-	-	-	-	5.83
Notts	-	-	-	-	5.47
Gloucester	-	-	-	-	5.36

It is curious, in looking over Table XIII., to notice what a difference there is between the English and Welsh Counties in their modes of disposing of the lunatics.

Thus, in Anglesey, 72 per cent. of the pauper lunatics reside “with relatives and others,” and only 26 per cent. are in asylums, whereas in Bucks, 72 per cent. are in asylums and 12 with relatives.

This holds good with several of the Welsh counties. For instance—

		in asylums.		with friends.
Cardigan has	-	39	per cent.	60
Carmarthen	-	30	”	63
Carnarvon	-	34	”	54
Brecon	-	48	”	38
Merioneth	-	26	”	59
Pembroke	-	37	”	57

In England the lowest per centage in asylums is 51 (Gloucester), and the highest, 77 (Surrey), while the larger number of counties have about 60 per cent. in asylums.

This difference probably depends partly on the habits of the people and the local difficulties, the distances to be traversed in a hilly and thinly populated district, &c. ; but possibly the prejudices of the people have the most to do with it.

There was no great increase in the total admissions of the year, and the recoveries and deaths were at the average rate.

The need for further asylum accommodation for the Middlesex patients still offers an occasion of controversy, but the Commissioners seem a long way off carrying their point at present.

There is one “extraordinary case” related at length, which is so unusual in its nature that we reproduce it in full.

It came to the knowledge of the Commissioners that a gentleman about 35 years of age, reputed to be wealthy, and who is designated Mr. A., had been for some years living in extraordinary seclusion at the chief hotel in a provincial town; and on enquiry it was learnt that the acting manager of the hotel had alone any access to him, and that the gentleman's habits generally were scarcely consistent with sanity. An order to visit was obtained from the Lord Chancellor, and a medical member of the Board immediately executed the order, accompanied by the secretary. On their arrival at the hotel, the manager, Mr. M., was not forthcoming; but, knowing the position of Mr. A.'s room, the visitors, acquainting the landlady with the nature of their visit, made their way upstairs, and there came upon Mr. M., who evinced much consternation on learning the mission. Giving no heed to his entreaty for some delay, the Commissioner put him aside, and, passing through the ante-chamber, opened a door leading to an inner and perfectly dark room. A loud voice issuing from the darkness—the voice of a man under surprise and in alarm—demanded repeatedly what was the matter. Making conciliatory reply, and stating the official and friendly nature of the visit, the Commissioner called for lights; and a scene then presented itself which baffles description. From wall to wall, and to a considerable height from the floor, the room was literally blocked up with a mass of furniture and rubbish; and the visitors had to pick their way over broken crockery, and edgeways along a single tortuous lane leading through the lumber. Everything was in disorder, and nothing apparently for use. Behind a table covered with innumerable bags lay Mr. A. on a small broken-down sofa in the centre of this mass, and closely hemmed in on every side by it. He was enveloped in a rug, and, the Commissioner believes, was without any other clothing. His face was tolerably clean, but somewhat pale; his bare arms were lean, and his right hand very dirty; the nails of both hands of extraordinary length, and begrimed. He stated that he was in perfect health, but complained of rheumatism in the knees and fingers; he also admitted that he could not walk or even stand up in consequence of recent contraction of his legs, and that his sleep at night was usually broken. His manner was highly nervous, but he betrayed no delusions whatever. His conversation showed that he must have received a good education. His gentlemanly demeanour contrasted most painfully with his disgraceful condition. He insisted that the spectacle before the visitors was simply the result of faulty habits which had gradually overpowered him, and from which no one would take the trouble to free him. When pressed to explain why he did not long ago resume his clothing, get up, pay his bill, leave the hotel, go elsewhere, and live otherwise, he answered that though for many years and still most anxious to do all this, no one would arrange it for him. He repeatedly declared that no opposition had ever been made to his departure by any person, but his complaint was that no one would help him to leave, and it was impossible for him to leave or move in the

matter without such previous help. He strongly expressed his dislike of the hotel, and of the landlady. He spoke in no friendly terms of Mr. M., but chiefly because he would not actively assist him in leaving the hotel. That he had not washed for years, he did not conceal; he said that he abstained from the use of water because he found that washing aggravated the rheumatism in his fingers. His abstemious living (consisting always of only two meals, tea at 5 p.m., and three cutlets with water or tea at 10 p.m.), he explained as a mode of expressing his unfavourable opinion of the hotel accommodation and desire of leaving immediately. He had persisted in wearing nothing save the rug, because he had made a sort of promise to himself that he would wear no clothing until he could get away from his present quarters. Mr. A. freely admitted that he never had any light during the day before 5 p.m., but candle-light thereafter during the night, and that he used no bed. He stated that he occasionally read the newspapers, but not often, because it drew away his attention from the chief object of his life, which was to induce somebody to effect his removal from his present position. He over and over again insisted that it was impossible for him to leave without aid, but that he should be delighted to leave if any person would arrange it. The atmosphere of the room was very offensive. Mr. A. owned to the possession of a large income from entailed colonial property, which he said was managed by a gentleman holding a high official appointment. He admitted also his ownership of a farm near B., managed by a Mr. L., a veterinary surgeon, in whose integrity he had also perfect faith; but he never called upon either gentleman to account, and neither had rendered any account to him for a very long period. This matter gave him no anxiety; so soon as he left the hotel he could and would then attend to everything, but till then to nothing save his liberation from his present quarters. Mr. A. said he had no relation or friend to whom he could or would apply for assistance in leaving the hotel. He especially deprecated any communication of his present position to his only relative, an aunt, whose name or address he declined to give. He strongly objected to their visit and to any visit by any person, as he was unwilling that his miserable condition should be witnessed. It appeared from his statement that he had been in this seclusion for many years. The landlady has admitted hotel charges against him at the rate of £400 to £500 a-year. He had three rooms, each leading into the other, but he occupied only the room in which he was found; it is spacious, and with the ante-room formed the assembly room. The room he occupied had evidently not been cleaned for years. Mr. A. explained that an offensive remark from a former housekeeper led to his refusal to have anything touched by her; his constant anxiety to leave the hotel, he said, had been the sole cause of the subsequent neglect. He said he would oppose all proceedings in lunacy, but he eventually consented to see Dr. C., of the County Asylum, formerly known to him. Dr. C.

accordingly visited him, and concurred with the Board in thinking him of unsound mind and not under proper care and control. Dr. C. found a door close to his couch leading into a room, which was even in a more filthy condition than his own, "in fact the stench was calculated to cause typhoid fever or such like disease." Dr. C. reports:—

"He stated that previous to his going into seclusion, which he now deeply regretted, he felt himself for some time different from other young men; that he felt he was looked upon by the people as a lunatic; that he gave way to his feelings with the result I now saw before me; that from the first he determined to give up leading such a life, but that daily he felt he became more powerless from want of physical strength; that he felt quite ashamed, and that the state of his rooms was a disgrace to a man in his position; that he was most anxious to leave where he was; that he prayed daily that some one would turn up who could assist him in carrying out his wishes; that frequently when he heard the people talking together below his windows, he exclaimed, 'Oh, God, when shall I be assisted out of this state, and be able to mix again with the world.'"

The usual statutory proceedings were adopted, and Mr. A. was removed to the County Asylum. The Medical Superintendent gives this account of him on his arrival:—

"His countenance was pale and haggard, but his body generally was fairly well nourished. His beard was shaggy and untrimmed, fully 2ft. in length; but the lower two-thirds were inextricably matted together with filth, and contained numerous vermin. His hair was even more matted and dirtier than the beard, especially on each side over the ears, being in this condition more than a foot in length. His apparel consisted of a large piece of baize; under this a piece of greasy and filthy canvas around his shoulders, fastened with long pins; while around his loins was a still more disgustingly filthy knotted clout, fastened in the same manner, but so narrow and worn as to be totally inadequate and useless for the purpose for which it was apparently intended. His body was otherwise in a state of nudity. His feet were clouted with old and dirty American cloth externally, while under this was an admixture of filthy rags, paper, and refuse, tied with numerous strings about his toes, feet, and ankles, the condition of which was filthy beyond description; the great toe nails were an inch and a half in length, that of the other nails diminishing in proportion. The finger nails were also enormously long, and, with the hands, very filthy. His knees were much bent, in a flexed position, the flexor tendons remaining rigid and prominent; the legs formed nearly a right angle with the thigh, resisting any extension, but permitting the slightest degree of extra flexion; there was but little comparative pain caused on manipulation; there was no swelling, tenderness, or indication of active disease, the affection being apparently due to continued maintenance of one position, causing a permanent stiffness."

Proper inquiries were made with a view to the protection of his large property. He had come to the hotel in 1857, went to Germany in 1859, but shortly returned. After 1863, it seems, he admitted no one to his room but the manager of the hotel and Mr. L., and not the latter after 1868. It is satisfactory to learn, in conclusion, that after a comparatively short time he was able to leave the asylum so improved as to take the full management and control of his property.

The Scotch Report is, as usual, elaborate and instructive,

and is evidence of the laborious industry and ability of its compilers.

The number of insane in Scotland on Jan. 1st, 1870, is given as 7,571, of whom 3,561 were males, and 4,010 females. Of these, 1,295 were private patients, the males being only three in excess of the females, and of the paupers 2,912 were males and 3,364 females. Of the paupers, 3,547 were in Royal and District asylums, and 1,469 in private dwellings. There are supposed to be 2,000 more living privately, and unreported as insane.

In Scotland, as elsewhere, the accumulation of the insane begins to press uncomfortably, though it is not a question yet of such magnitude as in the crowded districts of England. The Scotch Board, in considering this increase, points out that there is a tendency to allow patients to remain in asylums needlessly, and it thus strikes at the root of the whole question. It says (p. v.) :—

“It is difficult to believe that any real necessity has arisen for the detention of 504 pauper lunatics in asylums at 1st Jan., 1870, above the number of those detained at 1st Jan., 1868; especially as in the same period we find an increase of only 5 in the number of private patients. On this account, as well as for other reasons, we are led to believe that the increase of pauper lunatics is in great measure due to the *artificial fostering of legislation.*”

That there is a general increase is admitted, for at p. xiv. we read—

“The general tendency, however, it will be observed, is towards an increase. Thus in 10 years the proportion of pauper lunatics in the general population has increased from 180 to 202 in every 100,000, and the proportion of pauper lunatics to paupers from 66·57 to 77·14 per 1000.”

There is, however, a great difference in the proportion of the insane to the population in various districts, for while Perthshire, with a population of 133,500 has 384 pauper lunatics, Renfrewshire, with 177,561, has only 216.

Of the various causes conducing to this are mentioned, “the smaller ability of the poorer classes in Perthshire to maintain their insane relatives without parochial relief; the more acute and less persistent form of lunacy in Renfrewshire; and the greater longevity of a population chiefly rural, like that of Perthshire, than of one chiefly urban, like that of

Renfrewshire." "As a rule, it may be assumed that there is a greater degree of mental activity in towns than in the country; and to this fact may possibly be ascribed the more frequent *occurrence* of insanity among an urban and busy population, than among one which is rural and placid. On the other hand, it must be taken into account that the increase of lunacy is found chiefly among the lower classes of the community, which nowhere display much mental activity, and which are most exposed in cities to influences which destroy health."

The only statistical method available for estimating the number of cases of insanity is by reckoning the admissions, but the date of admission by no means indicates the period of the attack, and is often governed by quite extraneous reasons. The season of the year is, thus, no criterion of the prevalence of insanity at a particular time, but one class of statistics is considerably influenced by this cause, viz., the deaths. In connection with this, it is remarked—"Cold increases the mortality among all classes of the population, and accordingly the deaths in asylums are most numerous in the colder months. But it is worthy of notice that while the mortality of both sexes is higher in winter than in summer, there is a difference in the tendency to death in the two sexes in the two seasons." There is "a preponderance of admissions and recoveries in April, May, June, July, and August, and a preponderance of deaths in November, December, January, February, March, April, and May." The higher mortality in asylums in these months is in accordance with the higher mortality which then takes place among the general population. The number of deaths of both sexes is greatest in winter; but the *tendency to death is in summer greater among females than males*. We have not the means of ascertaining whether the difference shown to exist between the male and female mortality in asylums in summer and in winter, extends to the general population. The question, however, is one of hygienic importance, and on this account its elucidation is desirable. For this end it would be necessary to compare the causes of death in the two sexes in the two seasons. Were this done, it would probably be found that in winter there are more deaths from *pulmonary* disease among males than among females; and in summer more deaths from *abdominal* disease among females than among males."

It seems that Scotland is already feeling the expense of keeping its lunatics an increasing burden, for we read that

"In the whole of Scotland the total expenditure has increased *more than a third*; but the increase is very unequally distributed, being in some counties moderate, but in others very great. This increase refers only to the maintenance of patients, and would be considerably greater were it to embrace the interest of the money expended in the erection of district asylums."

It is an odd fact that the proportion of *suicides* is much higher in Scotch than in English asylums. It is hardly likely to be due to any differences in management, and the Commissioners say they are "unable to offer an opinion."

They also, in remarking on the accidents which occur in asylums, throw out the suggestion whether "the aggregation of patients in asylums is not a main cause of many accidents." This is one of the evils attendant on the modern plan of herding great numbers of lunatics together, and we hardly see how it is to be avoided. Towards the end of their report, the Board discuss the question of dealing with "habitual drunkards," or so-called dipsomaniacs.

As this is one of the questions of the day, and an attempt has been made to legislate on it this year, it may be interesting to read at length the opinions of the Board, particularly as they are opposed to the popular notion of the good to be done by creating *quasi* reformatories for this class.

They say (p. xc.), "But while so far giving countenance to the employment of penal seclusion as to regard it as a legitimate experiment in the treatment of habitual drunkards, we must very decidedly express our conviction that, whether in lunacy, habitual intemperance, or crime, the only satisfactory course is that of prevention. The extensive establishment of lunatic asylums has done nothing whatever to diminish insanity. There is no evidence that prisons have reformed criminals. And experience, so far as it goes, is opposed to the view that any great good is likely to result from the establishment of reformatories for drunkards. But experience does teach us that insanity, intemperance, and crime most abound among those classes of society which are most exposed to the influences which tell adversely on physical health and mental culture. Such are overcrowding, bad ventilation, faulty drainage, overwork, poor feeding, and a want of healthy recreation for mind and body. In the early part of the present century, intemperance was of far more frequent occurrence among the upper and middle classes of society than it is at the present time; and this change has resulted, not from the

institution of penal establishments for the reform of drunkards, but simply from the improved habits and higher aspirations of the people. The sources of pleasure and enjoyment have been extended; comfort has been increased; and far more attention is given to sanitary arrangements and to mental cultivation. The consequence has been a decided improvement in the intellectual and moral condition of the upper classes. But among the great mass of the people there has been but little improvement. 'The sons of toil,' exhausted by labour, and the unhealthy conditions in which their lives are spent, are mostly incapable of finding pleasure, except in the gross enjoyments of the public-house, from which philanthropists have endeavoured to wean them by the establishment of mechanics' institutes, working men's clubs, and other well-meant schemes. But these schemes have, as a rule, proved failures, from possessing no attractions to men of rude mould; and they will undoubtedly continue to prove failures until the principle is recognized and acted on, of qualifying every man by education and training to be the intelligent guardian of his own health, and the intelligent cultivator of his own moral and intellectual powers."

Such are some of the salient points of these Reports. They show much careful supervision, and a dispassionate reader will hardly find in them any ground for echoing the newspaper outcry which has been raised in some quarters against the powers that be.

The Medical Jurisprudence of Insanity. By J. H. BALFOUR BROWNE, Esq., Barrister-at-Law. London: Churchills, 1871.

There is one sentence in this book which strikes us as being, perhaps, the truest in it. "Sometimes, in shabby genteel families, a coat which was once worn by the father is adapted to the eldest son, and from him it passes to a younger brother. So it often is in books; and some recent writers upon the medical jurisprudence of insanity have been much indebted to their predecessors." We do not know who the writers are to whom Mr. Browne alludes, but we know that in this respect he is a sinner above all others with whom we are acquainted. We anticipated from the title of the work that

some new light would be thrown upon a well-worn subject by the labours of a lawyer; that he would, out of the stores of legal knowledge, enlighten not only his own brethren, but ours of the medical profession. And yet, when we read the book, we find it to be a mere compilation, confused and bewildering, from works not by lawyers, but by doctors, with a kind of running commentary by Mr. Browne, written in the style now generally known as "sensational."

To go through it chapter by chapter is not our intention. Although it purports to be a scientific work by a professional man, a work so rigid in legal phraseology that he cannot speak of Baron Alderson or Mr. Justice Tracy, but calls them Alderson, Baron, and Tracy, J., yet this is the way in which he commences his task of "explaining, and, therefore, reconciling the differences which too frequently arise between lawyers and medical men." "Many men have a pleasant way of taking difficulties to bed with them; they sometimes awaken in the morning to find the difficulty gone, and, in its place, a precipitate of wisdom. Their circumstances have creamed—their course is clear! Other men allow a difficulty to go to sleep, hoping that time will remove it. There is a Fabian policy with regard to mental matters. If a man has doubts, and cannot clip their wings, and confine them to the yard of his life, some folks would say of him that he is happy; others would say he is a fool. The latter class is composed of those who, when they come to a question they cannot answer, dismiss the subject by thinking it is one of those things that it is not meant that man should understand. A very easy way through life those people find for themselves, for questions are thorns. Such a creed is the panacea for contumely. To look upon humanity as a line drilled by fate or Deity, and yourself as the pivot man, to stand fast, or mark time, and be certain that, notwithstanding the seeming progress of the men at the other end, you will be found as far forward as they in the end, is a pleasant creed. Are not creeds cradles? and do they not rock us to sleep—sleep with dreams? But in questions which have to do with the relation of man to man, there is an urgency which will not allow of our placing them on the shelf to ripen, as we do apples. We must get at a sort of truth now. There is a corn under the tight leather, and, in order to get rid of the pain, even though anon we have to put a patch on, we must cut the shoe." And so on. Perhaps there are some who like this kind of thing, with its tropes and metaphors. If it were only a matter of taste, we would leave

it to each man to admire or not; but for the life of us we cannot understand the half of what the writer means, so wonderfully does he wrap up his meaning, if he has one, in this "tall" writing. Now the book is entitled the "Medical Jurisprudence of Insanity," and this being so, we presume that it is intended chiefly for the medical profession. But we seek in vain for any qualifications possessed by the author, which enable him to teach medical men something they did not know before. Nearly everything in the book may be read in other books written by doctors, with the exception of here and there a passage in which Mr. Browne favours us with his own opinion on some point, or some case, in language so foggy as to make confusion worse confounded. And yet, though he borrows so freely from medical works, and bases his book entirely on one, he belabours the medical profession in the roundest terms, and holds up to scorn its "utter incompetence."

The author has taken as his model and guide the well-known work of Dr. Isaac Ray, and has followed this so closely that his own book might almost be called a new edition of Ray, brought up, by means of a few modern cases, to the present time. To prove that we do not make this assertion without cause, we will give the Tables of Contents of the two works:—

RAY.

CHAPTER I.	Mental Disease in General.
CHAPTER II.	Idiocy.
CHAPTER III.	Imbecility.
CHAPTER IV.	Legal Consequences of Mental Deficiency.
CHAPTER V.	Pathology and Symptoms of Mania.
CHAPTER VI.	Intellectual Mania.
SECT. I.—General Intellectual Mania.	
SECT. II.—Partial Intellectual Mania.	
CHAPTER VII.	Moral Mania.
SECT. I.—General Moral Mania.	
SECT. II.—Partial Moral Mania.	
CHAPTER VIII.	Legal Consequences of Mania.
SECT. I.—Legal Consequences of Intellectual Mania.	
SECT. II.—Legal Consequences of Moral Mania.	

BROWNE.

CHAPTER I.	Lunacy and Limited Responsibility.
CHAPTER II.	On the Causes of Insanity.
CHAPTER III.	Of Unsoundness of Mind.
CHAPTER IV.	Amentia and its Legal Relations.
CHAPTER V.	On the Pathology and Symptoms of Mania.
CHAPTER VI.	On Intellectual Mania.
CHAPTER VII.	On Moral Mania.
CHAPTER VIII.	On Partial Moral Mania.
CHAPTER IX.	The Legal Relations of Mania.
CHAPTER X.	On the Legal Relations of Moral Mania.
CHAPTER XI.	Dementia and its Legal Relations.
CHAPTER XII.	Epilepsy and its Legal Relations.

CHAPTER IX.	CHAPTER XIII.
Dementia.	Somnambulism and its Legal Relations.
CHAPTER X.	CHAPTER XIV.
Legal Consequences of Dementia.	Drunkenness and its Legal Relations.
CHAPTER XI.	CHAPTER XV.
Febrile Delirium.	On Aphasia and its Legal Relations.
CHAPTER XII.	CHAPTER XVI.
Legal Consequences of Delirium.	On Acute Delirious Mania.
CHAPTER XIII.	CHAPTER XVII.
Duration and Curability of Madness.	On the Legal Relations of Maniacal Delirium.
CHAPTER XIV.	CHAPTER XVIII.
Lucid Intervals.	Feigned Insanity.
CHAPTER XV.	CHAPTER XIX.
Simulated Insanity.	On Concealed Insanity.
CHAPTER XVI.	CHAPTER XX.
Concealed Insanity.	On Lucid Intervals.
CHAPTER XVII.	CHAPTER XXI.
Suicide.	The Admissibility of the Evidence of the Insane.
CHAPTER XVIII.	CHAPTER XXII.
Legal Consequences of Suicide.	On the Prognosis of Insanity.
CHAPTER XIX.	CHAPTER XXIII.
Somnambulism.	On the Examination of Persons supposed to be of Unsound Mind.
CHAPTER XX.	
Legal Consequences of Somnambulism.	
CHAPTER XXI.	
Simulated Somnambulism.	
CHAPTER XXII.	
Effects of Insanity on Evidence.	
CHAPTER XXIII.	
Drunkenness.	
CHAPTER XXIV.	
Legal Consequences of Drunkenness.	
CHAPTER XXV.	
Interdiction.	

If any one will examine these two tables, he will see that they correspond most closely; while some of the divisions, as Intellectual Mania, General and Partial, and Partial and General Moral Mania, are quite peculiar to Dr. Ray, and, so far as we are aware, have been adopted by no other author; yet Mr. Browne gives them as his own, without the least acknowledgment. In the third chapter—"Of Unsoundness of Mind"—he discusses the classification of insanity, and gives two examples of classification, one his own, which he says "is somewhat the same, in its main features, as that adopted by Esquirol," the other that of Dr. Batty Tuke, whose name is not mentioned, but which has, he says, found some favour in the eyes of the medical profession. We are not aware that the medical profession has anywhere expressed its approval of Dr. Tuke's classification, but it has warmly approved of Dr. Skae's, of which Dr. Tuke's is a modification. But to return to Mr. Browne's, which is, he says, the same as that of Esquirol. We always thought that Esquirol's

divisions were Melancholia, Monomania, Mania, Dementia, and Imbecility. We can, however, find a classification much more nearly resembling his than does that of Esquirol. We turn again to Ray's, which is as follows:—

INSANITY.	Defective development of the faculties	{	Idiocy	{	1. Resulting from congenital defect.
			Imbecility		2. Resulting from an obstacle to the development of the faculties supervening in infancy.
	Lesion of the faculties subsequent to their development	{	Mania	{	1. Resulting from congenital defect.
			Dementia		2. Resulting from an obstacle to the development of the faculties supervening in infancy.

Now compare with this Mr. Browne's, which he says is so like that of Esquirol:—

UNSOUNDNESS OF MIND.	From defective development or diminished activity or inertness of the faculties	{	Congenital or occurring in childhood	}	Amentia	{	1. Idiocy	}	a General.
							2. Imbecility		b Intellectual.
		{	Occurring in after life, when the faculties have arrived at a normal state of development	}	Dementia	{	1. Consequent on mania, mental shock, or injuries to the brain.	}	c Moral.
							2. Senile.		
	From undue excitement or activity of the faculties	{		}	Mania	{	1. General.	}	a General.
							2. Intellectual		b Partial.
							3. Moral		a General.
									b Partial.

Amentia is divided by Mr. Browne into idiocy and imbecility. If we compare the fourth chapter on amentia and its legal relations with Ray's three chapters on idiocy, imbecility, and the legal consequences of mental deficiency, we shall see how closely they correspond. When Dr. Ray's work was written, two of the chief continental authorities were the German work of Hoffbauer and the French of Georget, and these are quoted by him largely. When Mr. Browne treats of imbecility, he quotes Hoffbauer and Georget, and quotes them as if he had read their opinions in the original treatises, of which he gives the foreign names.

As examples of imbecility, Dr. Ray gives several celebrated cases of the day; one, that of Miss Bagster; the other, that of the Earl of Portsmouth. Accordingly, we find Miss Bagster and the Earl of Portsmouth quoted by Mr. Browne. Ray

also refers his readers to the case of *Ingram v. Wyatt*, though he does not give it. Mr. Browne quotes this in addition to the others, and with the exception of the case of Mr. Windham, and that of a murderer named Carr, he adds scarcely anything to the information we already possess in the pages of Ray. Another case which he quotes, that of Edward Davies, is also given by Ray, though in another place. Yet in the whole of this chapter Ray's name is not mentioned. When Georget is elsewhere quoted, the translation is word for word that of Ray, the passages ending and beginning in the same place.

Mr. Browne is a barrister, and we would thankfully receive from him some information from his special standpoint; but why should he teach such matters as the pathology and symptoms of mania, or the prognosis of insanity, or the causes of insanity? We are quite certain that he has neither knowledge nor experience calculated to enable him to inform our profession on these points. The result is that he goes right and left to the works of medical men, and makes absurd mistakes in compiling from them. Let us take an example. "Dementia," he tells us, "is either acute or chronic. The first of these is generally the more curable form of this disease, but it may pass into acute mania. *It is presumably caused by softening, or other chronic disease of brain.*" If Mr. Browne had only requested some physician to revise his book, such a statement could not have escaped notice. His descriptions of insanity in the same way indicate that he is not familiar with the subject on which he is writing, but has "got it up." Like his prototype Ray, and like many others of that day, he uses the word *mania* as synonymous with *insanity*; intellectual *mania*, moral *mania*, and so forth. But when he describes mania, he describes the noisy excitation which usually is so called, and leaves out altogether all description of melancholia. Thus he says, in chapter v., "The individual loses all sense of propriety and decency, becomes mischievous in an extreme degree, wet and dirty in habits, abusive in language;" and then, "Some general description was necessary before classifying the species of mania according to their mental symptoms." These species being intellectual and moral mania, general or partial, a reader who knew nothing about the subject might infer from this chapter that all patients, whether intellectual or moral maniacs, were wet, dirty, abusive, and mischievous.

The same unpractical character marks the author's remarks

on the legal relations of insanity. There is not the ring of experience in what he suggests. Lawyer-like he holds to the *dicta* of the judges as regards the responsibility of the insane. We suppose that he is bound to do so, but all this we have heard and read before *usque ad nauseam*. "With regard to partial intellectual mania," *i.e.*, monomania, "it seems to us reasonable that the insanity which does exist should relieve from responsibility only in case the act, which would otherwise bring the individual within the criminal law, is connected with the erroneous impressions which are traceable to disease." Now, what we wish to ask Mr. Browne, and all lawyers, is, first, how can anybody, psychologist or not, determine beyond all doubt that no connexion exists in the insane mind between an insane idea and a given act; secondly, who is to decide that no such connexion exists. Is the judge to do so, who may perchance never have spoken to a lunatic in his life; or is it to be determined by a British common jury? Are counsel to agree upon the point, or is it to rest upon the opinion of the local medical man? At present, as Mr. Browne knows, and virtually admits, it is a mere toss-up whether justice is done or not. With regard to moral insanity and partial moral mania, he admits with Ray that this exists, but here also some one is to determine *how far* the patient is responsible. "With regard to the civil ability of men labouring under any form of partial moral insanity, we would, as in the case of monomania, assert that they should be allowed to exercise all their civil privileges which they are not clearly incapable of exercising without hurt to themselves or others; and they ought at the same time to be deprived of the exercise of every civil right which they are incapable of performing without injuring the interests of others, or doing harm to themselves. Thus, it would have been ridiculous to deprive the gentleman we have mentioned, who was in the habit of stealing towels, of his right to exercise the franchise, to represent his county in parliament, or to manage his own estate. On the other hand, any one who, like the woman mentioned in the earlier part of this work, had an irresistible desire to throw her children in the fire, would be ineligible for the place of a nurse, and no contract entered into with her for such services would be binding upon the contractor. Still she ought—under due precautions—to be allowed to perform other duties of which she was clearly deemed capable; and as boys get certificates from their school or other masters, to say of what they are capable, so might

those persons have certificates from reliable medical gentlemen with reference to their capability of certain works, and their faithful performance of certain duties." Would Mr. Browne like to take the said woman as a cook on the certificate of a "reliable medical gentleman?"

Similarly in speaking of epileptics, and this chapter is one of the best, for he has had recourse to valuable authorities, he says that the individual ought to be held irresponsible when it can be proved that he is in a mental condition which renders him "incapable of judging fairly of motives;" but how this is to be decided, or who is to decide it, we are not told.

There is a chapter on aphasia, where we need not say Ray is of no avail. It is contained in three pages, and does not materially assist us in dealing with the mental state of the aphasic. Mr. Browne entirely omits to mention that with the aphasia there is generally right hemiplegia, and yet this is important, because patients who suffer from an inability to express themselves in words are often equally unable to indicate their thoughts in writing. Mr. Browne thinks that an interpreter ought to be had recourse to in these cases, as is done where a foreigner is giving evidence in a court; but it never seems to have struck him that when there is a dispute concerning the mental state of an aphasic patient, the persons most able to interpret, whether nurses or relatives, are certain to have an interest in the matter, and could not possibly be sworn like the interpreters of courts of law.

Mr. Browne has a chapter on acute delirious mania, a disorder very familiar to our readers, but not, we suspect, to Mr. Browne. Dr. Ray has a chapter on febrile delirium, which we think Mr. Browne has studied under the impression that the two terms indicate one and the same thing. Mr. Browne says, "with regard to the symptoms of this disease, when it does give warning of its approach, it does so by means of flushing of the face, pain and throbbing in the head, and heat of the scalp. After the mental symptoms mentioned above have shown themselves, while the patient is labouring under the incoherence described, and is unable to be aroused to any attentive effort, the eyes are generally open, dry, and bloodshot, and 'staring so blindly.'" Ray, talking of the delirium of acute diseases, says, "Delirium sometimes occurs suddenly, but generally comes on gradually, and is preceded by premonitory symptoms, such as pain and throbbing in the head, heat of the scalp, and flushing of the cheeks. The eyes are open, dry, and bloodshot, and

intently gazing into vacancy." Mr. Browne treats of the legal relations of this disease, and commences with these words: "In relation to delirium there can be no question as to the existence of lucid intervals." He then quotes a dictum of Sir John Nicholl, taken from Ray without acknowledgment, and two cases, both taken out of Ray, in one of which the testator died of pneumonia; in the other the disease was an acute disease, and we read that "for two or three days before her death she was at frequent intervals delirious." What such cases have to do with acute delirious mania, we are at a loss to perceive. Space prevents our saying more, or showing his obligations to other authors. We think enough has been shown to prove that this work is not worthy of being looked upon as an authority on the subject with which it deals. It bears the marks of haste and inaccuracy; misprints abound, and other mistakes to which it is not worth while to advert. We are still in want of a good book, and an old one refurbished will not answer the purpose.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *Insanity and Hospitals for the Insane in Ireland.**

"General Rules and Regulations for the Management of District Lunatic Asylums in Ireland."

The above is the official title of a revised code of rules issued on the 18th day of August, 1870, under the authority of the Lord Lieutenant and Privy Council of Ireland.

The number of the rules is one hundred and ten. One to ten have reference to the Board of Governors, their powers and duties; stated meetings, three being a quorum, are to be held monthly, and special ones upon a requisition to the Resident Medical Superintendent, signed by two or more Governors, or one of the Inspectors. Rule nine in this category is an important one, and requires that no increased expenditure, alterations in the staff or management, or alterations in the salary of officers, the sub-division of old or creation of new offices, or

* The Editors are indebted for this Report on *Insanity in Ireland* to an esteemed correspondent.

any other subject of importance shall be taken into consideration without a month's previous notice ; and that no resolution of the Board affecting discipline or management as established by the present Rules, shall take effect, if contrary to any of them, until it shall have been submitted, through the Inspectors, to the Chief or Under-Secretary, and shall have received the sanction of the Lord Lieutenant.

Rules eleven to twenty-six relate to the admission, treatment, and discharge of patients. Provision is made for the admission of inmates having some pecuniary means, but not sufficient for their maintenance in a private establishment, but who are not to be admitted so long as there shall be claims for those who have no available means of their own. These patients are to be subject to the same rules and regulations as those in ordinary, and the payment for them is not to exceed the average of the general cost, and is to be made in advance half-yearly. We question if the admission of pay patients has not been a step *ultra vires*, and still more so the policy of such an organic change.

Rules twenty-seven to forty have reference to the Resident Medical Superintendent, who is required to be duly qualified as a physician and a surgeon, and to hold a diploma in midwifery. The minimum salary of these officers is fixed at £340 per annum, when the number of inmates shall be under 250 ; £400 per annum when the number is above 250 and under 350 ; £450 per annum when the number is 350 and under 500 ; £500 per annum when the patients are 500 and under 600 ; £550 for 600 and under 800 ; no further provision being made for increased pay for a number exceeding 800, which we find is the case in the Dublin or Richmond District Hospital for the Insane, the report of which was noticed in our last issue, and which contained 986 inmates at the termination of last year. According to the descending scale of calculation as numbers increased, the salary of the Medical Superintendent should be now at least £600 per annum. We have always been of opinion that there should be a minimum and a maximum salary in those institutions. The Chairman of the English Lunacy Commission, Lord Shaftesbury, in his evidence before a Select Committee of the House of Commons, some time since, stated that "no superintendent ought to receive much less than from £500 to £600 per annum, besides a house and allowances ; one of the great defects of the present system being that the salaries of the medical officers were much too low for the service they perform." The same authority goes on to say—"I think that the country ought to secure the very best talent and responsibility that can be found, and they ought to raise their salaries higher. I believe in some of the asylums the salaries are higher ; but I hardly know one that is adequate to the work." No one will dispute the soundness and judiciousness of the above ; it will be for the benefit of the insane themselves, a liberal remuneration being the order of the day for those who are placed in chief charge over them, and not the cutting down salaries to the lowest possible figure. A minimum or commencement salary of £400 per

annum, and to increase annually by £20, until it reached a maximum of £700, would not be unreasonable, and would be only in accordance with what is the practice in Government Departments of the Public Service—that of a sliding scale.

The Medical Superintendents, by the new rules, are deprived of the advantage which they hitherto had of furniture being fully supplied for their residence, which is a very shabby piece of rigid economy, and entirely contrary to what exists elsewhere in similar establishments; it makes their claims now all the greater for their salaries being from the commencement at a fairly liberal rate, to go on regularly increasing up to certain limits, as above indicated, as well as to have a right to a two-thirds retiring allowance at a fixed period of fifteen years, which is now “a mockery, delusion, and snare.”

The duties of the Medical Superintendents, as laid down in the rules before us, are most responsible, onerous, and varied—they in fact are such as to tax to the utmost the mental and physical powers of the holders of this trying and anxious office, so replete at the best with worry and perpetual anxiety. He is to regulate and superintend the whole establishment, to be responsible for the well-being and *custody* (*sic.*) of the inmates; he is at all times to devote his best exertions to the efficient management of the institution; he is, before one o'clock, p.m. (mark the precision of this), and also occasionally at other times, to inspect the whole establishment daily, dormitories, dining-rooms, kitchen, laundry, stores, and other places; go through all the divisions and see that they are orderly, well ventilated, and of a proper temperature; visit the male divisions after the patients have retired to rest; he is to be careful that the following books are kept with regularity (here is specified a list of books which, in themselves alone for number and complication, would be an arduous duty); and as if this bookism and clerkism were not sufficient to occupy his time and attention, he is required to take care that the minutes of each meeting are accurately transcribed, and not only this, but to supply the Inspectors with a copy; that all communications are written and despatched in due course; that any returns or information required *by the Inspectors* are furnished to them, and this, too, *without delay*; that all bills and vouchers are regularly prepared and submitted to the Board meetings; that he shall be responsible for the disbursement of moneys; exercise supervision over the various articles contracted for as to quantity and quality, besides various other defined duties unnecessary further to recapitulate, enough having been stated to show that the Medical Superintendent of a Hospital for the Insane in Ireland is so bound up, that he shall not eat the bread of idleness, and that “the pound of flesh” shall be required at his hands for the wages he is paid. Nay, further, as if to place him under complete serfdom, and to proclaim that no discretionary action personally could be entrusted to him as the head of an establishment, he is never to be absent for the night without *special leave* from a Board of Governors or the Inspectors

than which nothing could be more unnecessarily and gratuitously offensive or derogatory to a gentleman in his position.

The office of an assistant to the Medical Superintendent is now for the first time recognized and provided for in these new Rules, which is assuredly a most needful one for all the duties that are imposed on the latter; it is only a great matter of surprise that such should not have been long since the rule and not the exception, as it is to the present time in all the District Hospitals for the Insane, with the exception of two or three thus properly officered. It is to be hoped, however, that in common justice to both superintendents and patients, assistants will now be on the staff of each establishment, and that care will be taken that their position is duly respected by suitable salaries, not below, but above that of the clerk and storekeeper.

Nineteenth Report of the District, Criminal, and Private Lunatic Asylums in Ireland, presented to both Houses of Parliament by Command of her Majesty.

This is the latest report we have been able to obtain of the Inspectors in Ireland, and embraces the year 1869, that for 1870 not having yet been issued when we went to press. It contains separate reports of all the district establishments, twenty-two in number, together with reports of the insane in the several union workhouses, county gaols, central institution at Dundrum for criminal patients, and the several private licensed houses, of which latter there are also twenty-two.

As regards the total number of the insane embraced in the above establishments, we find them thus tabulated, viz.—

In District Insane Hospitals	-	-	-	6,316
In Private Licensed Houses	-	-	-	639
In Gaols	-	-	-	5
In Union Workhouses	-	-	-	2,907
In Lucan, supported by Government	-	-	-	45
In Dundrum, for Criminal Insane	-	-	-	170

Total of Registered Insane	-	-	-	10,082
Insane at large	-	-	-	6,579

Total of Insane in Ireland in 1869	-	-	-	16,661
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The Report states that in respect of the District Hospitals the recoveries were at the rate of 43.8 per cent. The mortality under 9 per cent, and only 6.5 per cent., if calculated on the total number under treatment, namely, 8,506; these results being considered by them "satisfactory, particularly the recoveries." Much stress is laid

on the injurious operation of the Act passed in 1867, commonly known as Lord Mayo's, he having the responsibility of its parentage when Chief Secretary, for the facilities afforded by it to justices of the peace to commit too inconsiderately and indiscriminately, as "dangerous lunatics," into the District Hospitals; the Inspectors, on this head, pointedly and justly observing—"we think enough has been said to show that some change is necessary, particularly as there is ample accommodation in nearly all the asylums, and as the local governors and medical officers are fully alive to the great importance of early treatment on the first appearance of symptoms of insanity, and have, moreover, full powers to accord instant admission to any urgent case that may be brought before them; it would, on these grounds alone, appear inexpedient to continue to justices that authority which has been exercised in the manner described."

The total expenditure in the support and maintenance of the District Hospitals for the year was £140,034 10s. 11d., making the average cost £22 7s. 4d. per head, which must be considered as very moderate for the great amount of good received by the public in return for this outlay.

The separate reports of the respective District Hospitals are all satisfactory, each having been found on the several inspections—which averaged three and even more in the year—an excess of visitation, but very recreative for the inspectors themselves—highly creditable and efficient in all their details of management.

The Inspectors appear to have gone rather out of their legitimate course of action in their observations in regard to the appointment of chaplains in the Belfast District Hospital for the Insane. It is a matter of history that in this long-established institution not only the immediately local authorities, but also the outside public, as represented by the grand juries and others, were entirely against the appointment of such officials. We need not here repeat our own views on this vexed question, but which, as disinterested lookers-on, entirely coincided with the opponents to chaplains, on special grounds, in Belfast. Suffice it now to say, that after a well-fought and unflinching contest sustained by the anti chaplains, extending over some eighteen or twenty years, as well as we can tax our memory, from the first mooted of their appointment in Belfast, victory was at last obtained by the pro-chaplain party, through legislative pressure in 1867 by means of "the Mayo Act" then passed very hurriedly, as we stated at the time, and which has been already referred to in this notice as one strongly denounced by the inspectors themselves *quoad* its abused plenary powers to justices of the peace in the committal of so-called "dangerous lunatics." In the first place they refer to certain discrepancies in the usual annual returns they received from the Resident Medical Superintendent, as if done for a purpose (*proh pudor*), their remarks on this head being :—

"We merely mention this fact because great stress was laid upon

the number of recoveries taking place in the Belfast Asylum, such recoveries being attributed by the Board of Governors to the fact that chaplains were not allowed to minister to the spiritual wants of the inmates in that institution."

And again, undisguised *animus*, however unbecoming on their part, is thus plainly manifested:—

"We trust now that the question is at length solved, the Resident Medical Superintendent, whose personal dislike to the introduction of chaplains has been all along no secret, will lend himself to the good work by facilitating the chaplains in the discharge of their duties by every means in his power; so that, should a falling off unhappily take place in the annual number of recoveries for the future, it might not be attributed to a different cause than the effects of religious consolation administered by clergymen to the members of their own flocks." (!)

We shall dismiss the above extracts, the spirit of which we cannot but regret, by simply asking the question in respect of the one referring to the returns—Did the Inspectors call the attention of the Resident Medical Superintendent at the time to the discrepancies they state to have discovered in them, and thus afford an opportunity for an explanation, which would have been only fair in their position towards him?

And as regards the latter quotation, it seems somewhat undignified and extra official on the part of the Inspectors to make a personal matter of what was strictly of a public as well as of a deeply important nature, and to be discussed, as it had been until now, irrespective altogether of individual or inspectorial feeling or predilections, and unalloyed with any *odium theologicum* bias.

The state of the insane in the Union Workhouses the Inspectors found to be considerably improved, a system of classification or separation having been adopted in Belfast, Waterford, Limerick, &c. Unions, and their food, sleeping accommodation, and clothing duly provided for.

Their gross total of 2,907 is thus classified:—

Simple Idiots	-	-	1,171
Epileptic Idiots	-	-	462
Simple Lunatics	-	-	1,030
Epileptic Lunatics	-	-	244=2,907

We next meet with the Inspectors' Report of the Central Asylum at Dundrum for "Criminal Lunatics," under the able and humane superintendence of Dr. Corbet, a long-tried officer in that most responsible office, holding it as he has done so efficiently for the lengthened period of twenty years, and yet without any increase of salary that we are aware of all that time, a parsimony on the part of the Treasury which we cannot but be surprised at.

This establishment was originally built for 120 patients, but which,

owing to structural changes, now contains 185 beds. During the year the admissions were twenty-two (fourteen men, eight women), the discharges eleven (four men, seven women), and the deaths but two, a mortality most remarkably and creditably exceptional for smallness. Fifty-six of the total number remaining were cases tried for homicide (forty-two men, fourteen women), nine (all men) for shooting at with intent, felonious assaults eleven (five men, six women), minor assaults fifty-two (twenty six of either sex), arson nine (five men, four women), larceny, &c. thirty-three (ten men, twenty-three women). No untoward event or accident occurred during the year, and the absence of injuries to the house, either as to structure or furniture, is another most unusual feature of Dr. Corbet's happy—though “criminal” withal—family. The grounds amount to twenty-two acres, on which a large portion of the inmates is most advantageously employed, as will appear from the fact of a clear profit over all farm expenses to the amount of £206 10s. 0d. having been realised during the year. We doubt if Dr. Hitchman, of the County Derby Asylum—who is so celebrated for his superior farming as well as other abilities—could exceed this agricultural wonder of finance on the part of Dr. Corbet, who, as the inspectors truly remark, “devotes great attention to the land,” as is evident from its productiveness.

We must conclude our notice of the “Central,” which we could have desired to have considerably extended, had space permitted, with the annexed, only too modestly framed suggestion, which we hope before this has been attended to by the “proper authorities;” if not, all we can say is “the sooner the better,” and that the Inspectors will not have discharged their duty of pressure until their recommendation is effected.

“Considering the arduous duties of the officers and attendants, and relatively speaking, their greater responsibility as employed in a criminal establishment, we could desire an improved scale of salaries and wages at Dundrum.”

The Proprietary Licensed Institutions for the Wealthy Insane in Ireland, as already stated, are twenty-two, the aggregate number of patients under treatment in them being 639, the largest containing 137, and the smallest 1 only, two had but 2 inmates each, one had 4, one had 7, two with 8, two with 10, one with 12, one with 17, two with 24 each, one with 31, one with 33, one with 34, one with 39, one with 42, one with 48, one with 49, and one with 87. The total number of recoveries was 94, or 49.73 per cent., and that of deaths 39, or 6.16 per cent.

The Inspectors make the following remarks on the statistical returns of the licensed houses:—

“In our 17th report, referring to the statistical returns supplied to us annually by the proprietors of private licensed houses, we stated ‘these figures support the fact frequently observed upon by us, that while the mortality in private licensed houses is much less, the per

centage of cures at the same time falls far short of that which obtains in public asylums.'

"It is remarkable that in the following year, namely, 1868, the returns furnished set forth the cures at 42.3 per cent., the average for the previous eight years being 34, and in the year now under review, they are returned at 49.73.

"It is to be observed that in the previous years the numbers discharged under the heads of 'improved' and 'unimproved,' nearly equalled the number returned as cured; but in the returns of 1869, they amount to just one half.

		1867.	1868.	1869.
" Discharged cured	-	73	77	94
„ uncured	-	65	71	48

"We trust that the improvement apparent from these figures may be relied on, but it is a rather curious coincidence that our observations in previous reports should have been immediately followed by so large an addition as 12 per cent., taking the averages of 1868, 1869, to the number returned as cured."

This appears something very like an insinuation against the *bona fide* nature of the above returns, which no doubt the respectable proprietors of the licensed houses who supplied them to the Inspectors will feel it their duty not tacitly to lie under. The Inspectors are either very suspicious in their official capacity, or extremely captious and fastidious as to statistics; this not being the only exception they have taken in this report in the statistical way.

Our space will not permit us to proceed further in our analysis of the above admittedly able and important report, and which it should be mentioned contains, as usual, a most voluminous appendix devoted to elaborate returns (so taxing to the time of superintendents in preparing in the first instance), well calculated to afford a feast to lovers of figures, but to force a sigh from the Joe Hume school of economists for the large expenditure that must have been incurred in displaying in type column after column of statistical tables, to an interminable and eye-wearying extent, which not one in a hundred perhaps either looks at or rightly appreciates.

We could wish that the Inspectors would set a better example than they do in the use of terms which ought long since to have been exploded in the nomenclature of insanity. "Lunatics," "incurables," "cells," "asylums," *et hoc genus omne* of barbarism, in this age of advancement and improvement, are very much out of place, and they, in their position, might largely assist in the disuse of them. We do not exonerate the Medical Superintendents from a similar carelessness in their reports; some few strive against such offensive and unprofessional phrases, which is much to their credit. Insanity, unhappily, is looked upon as a disease of degradation, and no wonder, when those who ought to know better, aid and assist in the perpetuation of such terms as the above.

Reports of District Hospitals for the Insane.

Dr. McKinsty, the resident physician for the last twelve years of the Armagh District Hospital for the Insane, in his report of that Institution for 1870, observes that of the total number remaining in the house, viz., 142, not more than 21 afforded any reasonable hope of recovery. He calls attention to the necessity for an increased supply of water, that most essential element of comfort and for sanitary purposes being very deficient. The total under treatment during the year was two hundred and two, of whom twenty-eight were discharged recovered, and eight improved, &c. The deaths were twenty-four, and the assigned causes were:—Cerebral and cerebro-spinal affections, seven; thoracic affections, seven; disease of heart and arteries, one; debility and old age, eight; accidental suffocation whilst at breakfast, one. The supposed causes of insanity in the one hundred and forty-two cases remaining under treatment were, viz:—Moral, eighteen; physical, thirty-three; hereditary, fourteen; unknown, seventy-seven. Sixty were classified as noisy and refractory; forty-eight quiet and orderly, but insane; thirty-three moderately tranquil; one convalescent; twenty-eight were married; one hundred and one single; widowers and widows, eleven; unknown, two. As to education, four were well educated; sixty-seven could read and write; twenty-seven could read only. No education and unknown, forty-four. Four of the inmates were idiots, and thirteen epileptics. The total expenditure of the year was £4,756 12s. 3d., and the average cost per head was £26 17s. 9d. Dr. McKinsty's superintendence is evidently most efficient and creditable.

The eighteenth annual report of the Omagh District Hospital for the Insane for 1870, by Dr. West, affords the usual information of its working very fully and completely. It embraces two counties, those of Tyrone and Fermanagh. The inmates from the former number two hundred and ninety-nine, and from the latter one hundred and twenty-one, being a total of four hundred and twenty (two hundred and thirty-five men, one hundred and eighty-five women) remaining in the house on the 31st of December, 1870.

The discharges as recovered were fifty-four (thirty-three men, twenty-one women), as relieved ten (seven men, three women), and as unimproved, seven (six men, one woman). The deaths were thirty-nine (fifteen men, twenty-four women), and from the following causes:—

Abdominal affections, eleven (all women); cerebral and cerebro-spinal affections, thirteen (nine men, four women); thoracic affections, eight (four of each sex); disease of the heart and arteries, one (woman); debility and old age, two (women); fever and other diseases, three (one man, two women); accidental suffocation when at dinner, one (man).

Dr. West calls special attention to the supply of water having been

both deficient and impure, which are two most serious evils in any community, more particularly amongst the insane; but both of which had been provided against by the sinking of a new well, which afforded water excellent in quality, and abundant in quantity. He mentions as one of the advantages of patients dining together in a body, that of overcoming several obstinate cases of refusing to take food, who in the general dining-hall followed the example of the mass around them, by taking their meals unhesitatingly and heartily.

The Waterford District Hospital for the Insane has been in operation for thirty-seven years, and Dr. Maccabe's report of the establishment for the year 1870 is very succinct and interesting. The number treated was two hundred and forty-five (one hundred and fifteen men, one hundred and thirty women.) There were discharged, recovered, during the year, twenty eight (eleven men, seventeen women); improved, twelve (eight men, four women); unimproved, three (two men, one woman); and there died, fourteen (five men, nine women); the number remaining on the 31st December, 1870, being one hundred and eighty-eight (eighty-nine men, ninety-nine women.) The institution was inspected so often as four times during the year by the Inspectors, and the reports made by them of its condition were always highly satisfactory and greatly to the credit of Dr. Maccabe's zeal, assiduity, and ability in the discharge of his very anxious duties.

Dr. Eames, in his fourth report for the year 1870, of the Co. Donegal Hospital for the Insane, states there remained under treatment on the 1st of January, two hundred and forty-nine inmates. One hundred and thirty-three of whom were men, and one hundred and sixteen women; that the admissions for the year were seventy-eight, fifty-six being men and twenty women; making a total during the year of three hundred and twenty-seven; one hundred and eighty-nine men, and one hundred and thirty-eight women. Those discharged recovered were thirty-nine (twenty-four men and fifteen women). Relieved, six (men); not improved, eleven (nine men, two women); escaped, one man. The deaths were twenty-three (nine men, fourteen women); remaining, 31st December, 1870, two hundred and fifty-two, one hundred and forty-three being men, and one hundred and nine women. The average number resident during the year was two hundred and fifty-two, one hundred and fifty-three men, and one hundred and nine women. The average cost of each was £23 17s. 9d., and the total outlay of the year, £6,019 17s. 7d. The general health was excellent during the year, and the average deaths 9.1 per cent. Regular evening amusements are provided for the inmates, and the institution has the great advantage of a home band, which is the source of much pleasure to all. Newspapers and periodicals are freely at the command of the patients, which also is a great relief to their monotonous life, together with the keeping of certain festivals, thus making agreeable breaks in the year's course. The death of the late visiting and consulting

physician, Dr. Thorpe, is feelingly referred to by Dr. Eames, in his excellent and practical report now glanced at.

Second Annual Report of the Monaghan District Hospital for the Insane, for 1870. This is one of the more recently established public hospitals for the insane in Ireland, having been opened for the admission of patients in May, 1869. Formerly the county of Monaghan formed a portion of the Armagh District Establishment, and now is a district in itself, together with the adjoining county of Cavan. It is capable of accommodating three hundred and forty inmates, and on its books, at the date of the present report, the numbers were two hundred and ten, thus leaving a large margin for future wants, which is rather the exception in these institutions generally, a deficiency of room being too frequently complained of. The Resident Medical Superintendent, Doctor John C. Robertson, observes that "the greater number of the patients admitted were pale, ill-nourished, and in feeble health;" and again he very properly urges "the importance of transmitting the insane at an early period of the disease, even a short delay greatly reducing the prospect of recovery, and hence hospitals for the *cure* of insanity become, in a great degree, institutions for the *care* and *detention* of numbers of *incurables*."

We must, however, *en passant*, take exception to the several words in italics (so in the original) in the above extract.

As to "*cure*" in mental disease, in particular, we prefer the word—recovery. "*Care*" should be considered as much the right of the so-called "*incurable*," as of any other patient, inasmuch as nothing can be more legitimate, under any circumstances, than the "*care*" of the insane, so long as such is needed. "*Detention*," as implying a species of imprisonment, and not of treatment, is so far objectionable, and lastly, the term, "*incurable*," we deem altogether wrong in its use, in respect of those who have been the subjects of mental disease of long standing, a much more appropriate and professionally hopeful designation being Chronic Cases.

The total number under treatment during the year was two hundred and seventy-one (one hundred and forty-seven men, and one hundred and twenty-four women); they are thus accounted for:—

Discharged recovered, twenty-eight (thirteen men, fifteen women); improved, three (two men, one woman); died, thirty (twenty-three men, seven women); remaining under treatment, 31st December, 1870, two hundred and ten (one hundred and nine men, one hundred and one women). The causes of death were:—Cerebral and cerebro-spinal affections, twelve (ten men, two women); thoracic affections, ten (eight men, two women); abdominal affections, three (two men and one woman); debility and old age, three (two men and one woman); disease of heart and arteries, two (one man, one woman).

We observe that there were four "paying patients" admitted during the year, at an average rate of £27 10s. per annum, which was in

excess of the Privy Council Rules; the charge for such inmates, according to them, being the average general cost, and that, we find, did not exceed £23.

The official reports of the Inspectors of the state of this institution are highly favourable, who observe that "the previous experience of Dr. Robertson in Institutions for the Insane enabled him to effect very satisfactory results in a short time, and that accordingly they bore willing testimony to the zeal and energy evinced by him, and to the value of his practical knowledge in the discharge of his duties."

We have before us the first report of the County Down District Hospital for the Insane, for the year 1870, ably drawn up by Doctor Tyner, the Resident Medical Superintendent.

We have been forcibly struck with what must be considered as exceedingly humiliating to a liberally educated professional man—that the Assistant Medical Superintendent receives a less salary than that given to a merely lay official, the clerk and storekeeper, the latter being paid £100 per annum for the simplest routine duties, the former but £90 per annum for his confidential and responsible services, and of the discharge of which the Medical Superintendent states "he cannot speak too highly, or too highly value his assistance." This most assuredly is an anomalous state of affairs, and but ill calculated to obtain for the Medical Assistant the respect of the community he has the oversight of as chief next after the Medical Superintendent, and in whose absence he is the representative of. Under any circumstances, a less salary than £100 per annum is not likely to attract candidates of that status so desirable to have enlisted in aiding and assisting in carrying out the details of so important an institution as that for the care and treatment of the insane, nor to ensure the continuance of the services of an efficient officer for any lengthened period, who will naturally be on the *qui vive* for a better position, which, if he be "worth his salt," he will have little difficulty in obtaining.

This institution has only been in operation since the latter end of the year 1869, being the latest created of its kind in Ireland, and formed out of the Belfast district, in which the two adjoining and extensive counties of Antrim and Down were embraced and in union for the long period of forty years nearly. Now each county forms a district in itself. The institution is capable of affording accommodation for three hundred and sixty-three patients (one hundred and sixty-three men, and one hundred and fifty women), and at the close of the year 1870, the numbers in the house were two hundred and seventy-two (one hundred and sixty-four men, and one hundred and eight women.) The total under treatment during the year was three hundred and forty-seven (two hundred and two men, and one hundred and forty-five women), of whom forty-six recovered (twenty-two men, twenty-four women); eleven (seven men, four women) improved, and eighteen died (nine of each sex), leaving under treatment the above stated number

of two hundred and seventy-two. The death casualties were as follows :—

Debility and old age	-	-	-	7
Fever and other diseases	-	-	-	3
Cerebral affections	-	-	-	3
Thoracic affections	-	-	-	2
Disease of heart and arteries	-	-	-	2
Abdominal affection	-	-	-	1

Although it would appear that there is accommodation in this new district for 363, and although there were but 272 in it at the termination of the year, yet Dr. Tyner, in his report to the Board of Governors, observes, "I have to call your attention to the over-crowded state of the house at the male side, where we have totally insufficient sleeping accommodation, and where we dread the appearance of an epidemic, should not the defect be remedied before the warm weather comes on." The surplus room, it seems, is on the female side alone, the male department having more than there was provision for, which, with a new institution, erected at a cost of £60,559 4s. 10d., and not much beyond a year opened, is by no means a satisfactory state of things; nor, as regards another most important item in respect of the comfort and health of the inmates, namely, "the heating apparatus," which Dr. Tyner reports to be in very defective working order.

Dr. Garner, the Resident Medical Superintendent of the District Hospital for the Insane, of Clonmel, affords a very well-digested report of that Institution for the year 1870, the total number treated during the year in the Parent Institution being two hundred and ten, one hundred and six being men, and one hundred and four women.

There were discharged during the year, viz :—

	Men.	Women.	Total.
Recovered - - -	17	18	35
Improved - - -	1	1	2
Unimproved - - -	19	13	32
	<hr/>	<hr/>	<hr/>
Total discharged - - -	37	32	69

The deaths amounted to sixteen, nine men and seven women, the causes being :—

	Men.	Women.	Total.
Debility and old age - - -	8	4	12
Accident, violence, or suicide (<i>sic.</i>)	0	2	2
Disease of the heart and arteries -	1	0	1
Fever and other diseases - - -	0	1	1
	<hr/>	<hr/>	<hr/>
Total deaths - - -	9	7	16

The casualties under the head of "accident," &c., were two cases of suicide by strangulation. Inquests were held in both instances, and

verdicts given acquitting the officials of any blame. Dr. Garner, with much force and truth, observes in relation to the above—"Those alone who have the care of the insane, can estimate the persistency of the suicidal maniac, rendering unwearied watchfulness necessary on the part of the attendants; and even then not seldom is their utmost vigilance baffled and set at nought."

This Institution is one of the few not over-crowded, having accommodation, it appears, under altered arrangements, for 375, there being an auxilliary or "additional" establishment connected with it, but the two are now joined together forming the "Clonmel District Hospital for the Insane."

In the "additional" house there remained, on the 31st December, 1869, two hundred and one patients, one hundred and fourteen men, eighty-seven women. There were admitted into it, to the 31st December, 1870, twenty-seven, sixteen men and eleven women. Of these there were discharged six males, three being recovered, two improved, and one unimproved. The deaths were seventeen, nine men, eight women. There remained on the 31st December, 1870, two hundred and five, one hundred and fifteen men, ninety women. In both buildings, therefore—and now constituting one district—there was an aggregate number of three hundred and thirty, one hundred and seventy-five men, one hundred and fifty-five women, thus leaving a margin of forty-five for further admissions.

This is another of the exceptional establishments in Ireland in which an assistant medical superintendent is one of the regular staff, and which is certainly a step in the right direction, only we hope that his salary has not been made lower than that given to a merely lay official, a practice referred to already as so derogatory, in the course of these notices.

2. *German Medico-Psychological Literature.*

If there is any general fact that strikes one in reading over a number of German periodicals, devoted to psychological medicine, it is the thorough excellence of the clinical departments. With hardly an exception, cases are admirably reported in the larger journals, such as the "*Archiv*" and the "*Allgemeine Zeitschrift*;" it is not, as with us too often, the double purpose of making the exposition short, and of making it clear, that seems to be set before the writer, but the single one of making it complete. Hence, many of the cases given read like stories, at least as far as the history and symptomatology are concerned, and it need hardly be said that the scientific analysis of the symptoms and *post mortem* appearances is excellent to an extent which only Germans can often reach.

It is to be remarked that the transition of opinion from belief in restraint to that in non-restraint, is gradually proceeding in Germany. A good delineator, whose remarks on English asylums will be presently referred to, brings forward a feature of the asylums in our country, which must be more frequently introduced on the Continent before restraint can be finally abolished, viz., the construction, as part of each asylum building, of a good many single rooms, for the isolation of unruly patients.

Another striking point is the agitation which was going on among the medico-psychologists of Germany, at the date of the journals now in hand, for the embodiment in the national code of a different conception, as regards the responsibility of the insane for their acts, from that which had so far been prevalent, and which is still a received axiom among ourselves. It was sought, namely, to make the whole question of responsibility dependent on the point whether the criminal was sane or insane, without reference to the individual act. A medical jurist should not be asked (say the experts in Germany), whether or not the offender, at the time of the crime, knew what he was about; whether he acted voluntarily in committing it or whether under the rule of some impulse or delusion; he should simply be asked whether the criminal was of sound or unsound mind. This would evidently simplify, to a very considerable extent, the work of medical jurists; and it must commend itself to the common sense of every one who has seen in asylum life the inextricable admixture of will and impulse which regulates the deeds of such of the insane as are most likely, out of an asylum, to come into collision with the behests of the law.

The "*Archiv für Psychiatrie und Nervenkrankheiten*," Vol. ii., Part I,* opens with a paper by Dr. Ludwig Meyer on the "State of Public Provision for the Insane in Hanover." The author's comparison of the provision made in England with that made in his own country is very flattering to the former. In the course of the paper Dr. Meyer gives in his adhesion to the belief in the increase of mental diseases in modern times. His main end is to show the advantage of placing in "colonies" the chronic harmless insane, so that they may have as much as possible a domestic mode of life, and at the same time so that the State should find them as little expensive as possible. Following on this, a paper by Dr. H. Nothnagel, on "The Trophic Lesions in Neuralgia," after putting aside the assertion of mere want of exercise as the cause of atrophy in neuralgia, and declaring the presence of trophic nerves to be so far hypothetical, conducts to the conclusion that the "simultaneous sharing of the vasomotor nerves" in the neuralgic process is to be regarded as the cause of the atrophy. Dr. Julius Sander relates some cases of aphasia, without supporting any particular theory of the disease; and Dr. Th. Simon, of Hamburg, brings forward a case of "maculose (fleckweise) vitreous

* Berlin, 1870

degeneration of the cerebral cortex" in a female—not the subject of any mental disease—who had been of very haughty disposition, but had died after long residence in a poorhouse.

An interesting essay is that by Professor Westphal on "The Inverted Sexual Proclivity" (*Die Conträre Sexual Empfindung*). Two cases are related. One is that of a woman, æt. 35, who, from the age of eight years, felt an inclination to be constantly embracing little girls, and who, by-and-bye, when about twenty years old, acquired regular sexual desire towards her own sex. The patient practised onanism. She had cleft palate, and hare lip; her head was smallish; she was not good-looking. The sexual organs were normal, but tender to the touch. The happiest time of her life, she said, had been when she slept with a female cousin, whom, however, she did not disturb, save by handling. Having made an attempt to do violence to a girl for the purpose of gratifying her desires, and having been frustrated by the girl's resentment, this singular being fell into melancholy, with alternating paroxysms of rage. She was for two months in the asylum, and little was found wrong in her actions during that time. She confessed her misdoings and bad inclinations, and was very anxious for a cure.

The other case was that of a man who, habitually, from love of it, dressed in women's clothes. In him the only anatomical foundation for this choice was that the testicles easily ascended into the inguinal canals. His face had a slightly feminine appearance. He had had epilepsy, with loss of blood from the mouth at the time of the fits; not, however, from tongue biting. Fits of trembling came over him often. He was much with women when a boy; was to a small extent an onanist; and had had normal sexual inclinations.

Both cases show great patience and skill in working out the details. The conclusion is, that in both patients there were mental weakness (*Schwachsinn*) and a recurrence in the symptoms, reminding of *folie circulaire*. In reference to the occurrence of epilepsy in the last case, the remark is made that this disease is one "which stands in so close connection with the form of mental weakness just depicted, that I, at least, can hardly remember a case of so-called *moral insanity*, in which evidence of epileptic attacks could not be brought forward."

Dr. Th. Simon, of Hamburg, has two contributions—one in this Part, and the other in Part II.—to the pathology of paralytic dementia, as far as regards the spine. He gives the history and *post mortem* appearances of twenty-six cases in the fullest and most satisfactory manner. His researches bear especial reference to the presence in the cord of a certain sort of myelitis, characterised by the presence of granulated cells (*Körnchenzellen-Myelitis*), and his conclusions are mainly of a negative sort. Thus he finds that these granulated cells are not more frequent in the spinal cords of general paralytics than in other spinal cords. Such an abundance of these cells as to point to an antecedent myelitis, is rather a rare occurrence, according

to Dr. Simon; but that too is not characteristic of paralytic dementia (the last stage of general paralysis of the insane), since it occurs in other diseases. The tendency of the whole paper is to unite dementia paralytica with chronic alcoholism and other affections. One ground of union between these diseases is, that all of them are found at times as results of inflammation of the dura mater (pachymeningitis). Among the reports appended to this part of the "*Archiv*," there is one of a meeting of the Swiss medico-psychologists, at which votes were taken for and against non-restraint. The meeting was very decidedly in favour of the non-restraint plan. In the meeting of the Berlin Society, here reported, a discussion on a subject above referred to, took place, viz., as to whether the conception of "free will and accord," or that of mental sanity or insanity should be the ruling one in law-giving. A lawyer, who took part in the discussion, maintained that when the medical jurists had to pronounce upon the presence or absence of true volition in the criminal act, he really decided on the sanity or insanity of the individual; but this statement was not accepted by the medical men present; they maintained that in setting to the expert the problem of the voluntary or involuntary affection of the agent at the time of the act, the law put him on just the same level as any layman, the latter being quite as able to solve this problem as the expert.

In Part Second of the second volume of the "*Archiv*"* there is a very elaborate and important paper by Dr. Rudolf Arndt, of Greifswald, on the employment of electricity in alienist practice. At the commencement is a good sketch of the history of electro-therapy, beginning from the times when the negroes were wont to place their sickly children in the favourite haunts of the electric fish, in order to cure them. Dr. Arndt lays great stress upon the work done in modern times by Remak. The alternate rise and fall of the treatment by electricity in the estimation of physicians is well depicted. From the time of Volta, up to about the year 1800, there was a rise in its popularity; after that there was a decline till the work of Faraday, about 1830, began to retrieve the fortunes of the method, though it did not rise to eminence among the resources of medical art, till the labours of Duchenne, in 1850, were made known. These were capped by Remak's researches.

The rotation apparatus† was that first used in asylum practice, and it was employed for all sorts of purposes, till it degenerated into a mere instrument for stimulating and terrifying the patient. Occasionally, nevertheless, good results were got; often very bad results, and a case of the latter sort is given by Dr. Arndt.

The reputation of the method declined, and the discovery of contact electricity did not do much to stay the downward progress. Teilleux and Auzouy, in France, still reported favourably on the subject. A number of cases where voltaic electricity was used by the

* 1870. † For Franklinic electricity, *i.e.*, the old electrical machine.

former are quoted by the writer. Teilleux applied the current to nerves and plexuses near the surface of the body. Auzuouy had a theory that the skin was a very important tissue in the insane, and he used magneto-electricity* to arouse its functions.

At this stage Dr. Arndt selects for narration two cases treated with the induced current. In both there were favourable results; but in numerous other cases the results were unfavourable. "After all this experience," he then says, "I thought myself driven to the conclusion that the induced current, as usually employed, exercised a strongly irritating influence on the diseased central organs, and that it was, therefore, contra-indicated in all those cases of psychical ailment in which the symptoms present had in themselves the character of augmented irritability, or could be referred to the same state in the region of some nerve. In all so-called primary cases, then, in which a state of irritation of the brain has shown itself by the dominance of passions, whether positive or negative in character, its employment must be abstained from. Likewise, it must be laid aside in all those secondary cases which are marked by a high grade of weakness with irritability, and a tendency to reflex action. It may answer as a curative agent only for those cases which are marked by mere abdication of the brain's activity, by simple depression or paralysis of the functions." He thinks Faradization of the skin and of the phrenic nerves important.

A case is given of a girl eighteen years old, who had severe chorea with intervals of dementia; the dementia gained ground, and became continuous; now and then there appeared slight erotic tendencies. Faradization was employed to the arms, legs, phrenic nerves, and face. There was improvement after each application, which lasted two days at first, but gradually got more protracted. The sensibility to the current was nothing at first, but increased to a great extent as she got better. The face became pale and the pupils dilated during each *séance*. There was in this case no hereditary tendency to insanity.

Another case is one of dementia, after long nursing of a child through fever. A third is one of utter absence of mind in a young girl, alternating with fits of terror. The girl was very nervous, and a fright originated the psychical affection. She got quite better under Faradization. Of such cases Dr. Arndt gives seven in all.

On them follows a minute consideration of the effects of the constant current, and a discussion on anelectrotonus and katelectrotonus, on the direction of the current in the body, the proper position of the poles, &c.

In assigning to the induced and to the continuous currents their appropriate uses, Dr. Arndt alludes to the element of convalescence, probably present in the above-mentioned cases, and which he believes it was the part of Faradization merely to call out by its irritant action;

"Faradaic" or "induced" electricity.

he points to the constant current as the only agent which can really modify nutrition. The negative pole of the latter is to be used when it is wished to arouse irritability in a part, and the positive when this quality has to be diminished.

The path of the electric current in the body, Dr. Arndt maintains, is *the resultant between shortest distance and best conductors among the tissues.*

For the mode of passing the current through the brain, the writer refers to a paper by Erb, in the "Deutsches Archiv für Clinische Medicin" (vol. iii., 1867). To subject the spine to the current, one pole should be placed on the spine, the other on a limb, so that a part of the anelectrotonus or of the katelectrotonus coincides with the spine. The spine should, it is maintained, often be the object of galvanization, because it is very often the source of evil in insanity. Peripheral galvanization is to be used where a neuralgia began the mischief, or where there were decided peripheral symptoms at first.

In this number of the "Archiv," Professor Gudden describes a newly-discovered bundle of fibres in the brain of man and of mammals generally, passing, namely, from the anterior corpora quadrigemina to the peduncles of the cerebrum, past the internal geniculate bodies. He thinks this bundle is connected with retinal vision. The same author has another paper on deformities of the skull caused at birth.

Two cases are narrated by Professor Westphal of secondary degeneration of the cord, following, namely, on pressure. They tend to show that the connective tissue with its vessels, and not the nerve tissue, is first involved in disease.

An able paper by Dr. M. Jastrowitz follows, on "Encephalitis and Myelitis of very young Children." The symptoms ascribed to these diseases have been those of Infantile Tetanus, beginning with the child's squeezing the mother's nipple very hard in sucking. The appearances found after death are congestion of the membranes, hæmorrhages, softening, and a fatty state of the cells of the neuroglia. This last degeneration is especially seen in the corpus callosum. But these appearances, says the writer, are found in many brains of children. The question of pathognomony concerns especially the neuroglial degeneration. Is it normal, or is it the result of an inflammatory process? Virchow adheres to the latter view. The author of this essay examined the brains of eighty children, for the settlement of this point. All the "newborn" (those born after at least seven months of pregnancy, and of age not above one week), thirty-seven in number, had these appearances of fatty degeneration of the neuroglia. The fatty cells would seem, therefore, probably to be connected with the growth processes of the brain. The paper stops at this point, but is to be continued.

Westphal shows that, in dogs, secondary degeneration of the cord can be produced artificially; his plan is not to excise a part of the spine—this he characterizes as rather too tedious and severe an opera-

tion—but to drill a hole into the spine, the extent of the lesion being ascertained afterwards. His results are curious, but not of number sufficient to allow any conclusions to be drawn.

Dr. Leyden writes on the progressive "Paralysis of the Lips, Tongue, and Palate," of Duchenne. He gives it a new name, viz., that of Progressive Bulbar Paralysis (Bulbär-Paralyse). The pathological changes he finds to be not a "sclerosis," as affirmed by Trousseau, but a process of fatty degeneration in the medulla oblongata. The name is given from the old Latin term for the medulla.

From Dr. Ludwig Meyer's paper on "The Relation of the Insane to Criminal Jurisdiction," it is possible only to quote the conclusions. The general tone chimes in with what has been said above on the subject. The following are Dr. Meyer's proposals for embodiment in the new statute book of the North German *Bund* :—

"I.—Irresponsibility.

"There is no crime nor offence when the exercise of the free will of the agent was impossible at the time of the deed." Further, the exercise of free will is to be considered impossible,

1. If, at the time of the deed, the twelfth year of life had not been passed ;
2. If the agent suffered at the time from a mental disease ;
3. If he was forced to the deed by violence or threats ;
4. &c., &c.

II.—Diminished Responsibility.

If the exercise of free will was not wholly excluded at the time of the committal of a crime or offence, but was limited, then mitigation of the punishment is the proper course—or, then the judge (or bench) should look on this limitation as an extenuating circumstance—or "then the agent should have a less severe penalty than he should have had if he had committed the crime or offence wholly in the exercise of his free-will."

A limitation of the exercise of free-will was present at the time of the deed,

1. If, at the time of the deed, the twentieth year of life had not been attained ;
2. If a malady which had much influence on the state of the mind (Seelenzustand), or a predisposition to such a malady, possessed the agent at the time of the deed ;
3. If a high degree of emotional disturbance, of limited capability, &c., &c., was present during the commission of the crime."

The Berlin Medico-Psychological Association proposes the following three sentences for embodiment in the law on this subject :—

" (§ 46). A crime or offence is not present when the agent was mentally diseased or weak-minded at the time of the act, nor when the

exercise of free-will was excluded by force, by threats, or in any other way.

"If the reasons which do away with culpability, according to § 46, are present in a less marked degree, then a penalty should be imposed, in accordance with the principles laid down for the punishment of attempted crime (nach den über die Bestrafung des Versuchs aufgestellten Grundsätzen)." "When a culprit has been acquitted in accordance with § 46, it shall be decided in the sentence whether he is to be handed over to a public asylum for the insane. He shall remain in the same till an official report of his recovery or of his harmlessness shall have been made."

Under the "Pathology of the Sympathetic Nerve," a number of cases of Addison's disease are brought forward by Drs. A. Eulenburg and P. Guttmann. The paper is not concluded here.

Hadlich has a painstaking investigation into the cortical structure of the cerebellum. The branches from the large ganglion cells (cells of Purkinje) which have been traced only so far as the surface, turn back, according to Dr. Hadlich, into the greyish-red layer of the cortex, and there probably get united with one another. This scheme of the construction agrees with the hypothesis of the co-ordinating function of the cerebellum for voluntary movement.

We find chloral hydrate frequently passing under judgment in these journals. In this number there is a favourable report on it by Drs. Kelf and Hansen.

At the meeting of naturalists and physicians, at Innsbruck, Dr. Solbrig read an interesting paper on the mental symptoms in three cases of Morbus Basedowi (Graves' Disease). The speaker believed that the disease arose from paralysis of the sympathetic nerve; and he remarks on the fact (as has been done elsewhere) that Basedow's disease is sometimes hereditary.

In the Third Part of this volume there is an able paper by Dr. Ludwig Meyer, on "Chorea and Mania." He remarks on the connection between chorea and brain affections, and quotes Russell's cases, where this was especially observed. Acknowledging the relation of chorea to rheumatism, he reminds us of the augmented reflex irritability in the muscular variety of the latter disease. He considers this irritability as possibly analogous to that in chorea, and thinks it a good way of regarding chorea, to look on it as essentially a disease where there is very great facility in the muscles to be thrown into action in a reflex way. He directs attention to the fact that when the choreic affection goes over into mania, we have not to do with a state of increased stimulation of the brain, but with a weakness of that organ, which prevents it from using its wonted inhibitory power over the flow of ideas and actions.

A continuation of Dr. Rudolf Arndt's paper on "Electricity in Psychiatry," is mostly occupied with cases. The first two sentences may be quoted.

"The employment of the galvanic current for the insane, has been a good deal practised by me in the last two years, and in many cases I have attained to very pleasing results. For I am compelled to attribute cures to it alone here and there, where all other means had failed—cures which had been so long looked for in vain,—and in other cases I must place altogether to its account an amount of improvement which, in the end, enabled the poor patients to make progress once more behind the railings of the asylum, and to possess, if to a limited extent, still pleasurably, the joys which freedom alone presents."

An account of his experience of the subcutaneous injection of morphia in insanity, by Dr. J. B. Wolff, is very favourable to the employment of this agent. Dr. Wolff thinks that the alkaloid has an especial action on the vasomotor system of nerves. Hence he makes a practice of often injecting in the neck, that is, when a general and not a local effect is desired; not only because there is lax cellular tissue in that region, and it is a part easily accessible, but also because large ganglia of the sympathetic are in the immediate neighbourhood.

In this Part there is a long and deeply reasoned paper by Dr. Theodor Meynert, of Vienna, on the movements of maniacal patients, considered according to their course and their physical basis. The following paragraph may be quoted, as it plunges the reader into the middle of the matter at once:—

"One may therefore assert, without danger of any real error, that the twofold nature of the *crus cerebri*, consisting of base and tegmentum (Fuss und Haube), with the multiplicity of the ganglia attached thereto, corresponds to a double power of the brain to call forth identical movements, and this in response to two different sorts of stimulation. At one time the stimulation comes from the processes of the conscious mind, or, more strictly, from the cerebral hemispheres, and then this impulse is transferred from the ganglia of the *crus cerebri* to the *crus* itself, for after destruction of the grey nucleus (Linsenkern) by apoplexy, the influence of stimulation derived from consciousness on one side of the body is at an end. At another time the impulse comes from external stimulation, is transferred to the ganglia of the tegmentum of the *crus*, and by this is conducted to the muscles, for after removal of the optic thalami and corpora quadrigemina, increasing inability for the sorts of movement formerly elicited by direct irritation, becomes everywhere evident."

The paper goes deeply into the theory of maniacal movements, assimilating them to those actions which (as in walking) are produced by a very weak influence in the mind. The division of the *crus cerebri* into basis and crest (Fuss und Haube) is considered to represent the double nature of descending motorial influences. The impulse to motion which proceeds from consciousness, Meynert considers to run in the basis of the *crus*. An able argument from comparative anatomy is brought forward in support of this position.

A more extended consideration of Duchenne's "Paralysis of the Lips, Tongue, and Palate," than that referred to above is contained in

this number by the same writer as before, Dr. Leyden. Duchenne, he remarks, made a rigid distinction between this "bulbar" paralysis and progressive muscular atrophy. In the former there is paralysis without atrophy, said the French physician; in the latter there is atrophy without paralysis. Duménil, nevertheless, entertained the opposite idea, viz., that the former is a variety of the latter. Trousseau inclined to Duménil's opinion.

Dr. Leyden's cases are given at great length, and very carefully, and his conclusions may therefore be considered valuable. He regards, then, this affection as the symptom of a local myelitis. This opinion he grounds on the considerable increase of connective tissue cells (*sternförmigen körper*) in the medulla oblongata. As regards the question of a connection between this disease and progressive muscular atrophy, Leyden inclines to believe in its existence.

Dr. Gudden has a paper on rib breaking among the Insane. Although he thinks Germany free from cases similar to the worst reported in England, yet he records from *post mortem* examination a very large percentage indeed of bodies as being found to have sustained at some time fracture of one or more ribs.

The same writer details numerous experiments on the senses of sight and hearing in young animals. He brings forward many advantages of using very young animals for such purposes, among which not the least is the rapid union of parts and the exactness of reproduction of the tissues, leaving a very well defined and visible mark of any injury inflicted. This has very much worth when the animal, after living for a time under its changed conditions (with a portion of its brain excised, &c.), comes to be examined *post mortem*. The exact extent of the lesion formerly inflicted is very easily ascertained.

No less than fifty-six pages of small print are occupied by Dr. Arndt in relating a case of general paralysis, before and after death. The case came under the care of Professor Westphal at one time, and hence additional interest was lent to it. It is worth the astonishing diligence devoted to it. The mischief appeared to have begun in the spine, and progressed towards the brain. To extract a fragment of the case would be useless. Its completeness in every respect constitutes its worth; it was not distinguished by any remarkable rarity as regards the circumstances, but is, on the contrary, not unlike several of the cases recounted by Dr. Simon of Hamburg, referred to above.

In the "Allgemeine Zeitschrift für Psychiatrie und Psychiatrisch-gerichtliche Medicin," vol. xxvii.,* we find two cases by Dr. Solberg, of Basedow's (Graves') disease. It appeared first in a mother of a family, and was accompanied by melancholia, but both affections yielded to appropriate treatment. Curiously enough, the same complaint visited, shortly after, this woman's son; in him one cause at

* Berlin, 1870.

least of the outbreak of the disease appeared to be mental excitement, connected with a public examination of the school he attended, and where he had distinguished himself, too, by his diligence.

Dr. Nasse's paper on the relations between typhus and insanity tends to uphold an old idea—that the influence of the former upon the latter is a favourable one. The conclusions are founded on an experience of forty-three cases. Five were cases of mania, eight of melancholia, twelve of chronic mania (with delusions of persecution for the most part), six of chronic mania with exaltation, and twelve of imbecility. Ten cases recovered entirely after the fever; there was lasting improvement in three cases, temporary improvement in two, and no change in six. A paragraph near the end of the paper runs as follows:—

“I affix only some short remarks to the cases brought forward above, and direct attention, in the first place, with reference to the objection that the influence of typhus may be considered doubtful in producing recovery, and that the result would have been the same without it in the cases brought forward, to the fact that the changes for the better began in all the above-mentioned cases (only Case 3 among the cured forming a partial exception) immediately on the decline of the intercurrent disease, and especially with the abatement of the fever, and that the patients themselves dated their freedom from anxiety and hallucination, for the most part with the greatest agreement, from the time when the fever ended. The number of simple and primary physical affections (psychoses) among them makes but a minority of all the cases concerned. To them belong numbers 3, 4, 5, 7, 10, among the cured. As opposed to this, almost no one will be inclined to dispute with me when I affirm that the other cases (especially No. 8 among the cured, and Nos. 1, 2, 3 among the improved) were severe cases, and each of them indeed most unpromising as far as prognosis went, partly on account of their duration, partly on account of the determined progress they were making towards dementia, partly on account of their basis of imbecility, and partly, in the last place, on account of the paralytic phenomena which accompanied them. It appears to me to be of little use to consider more closely the form of the psychical disease, because the number of cases is so small, and the synopsis of the symptoms that has been employed appears to me to have no particular signification, in the absence of a knowledge of the changes in the state of the brain lying at the bottom of it. It may however be mentioned that a series of cases which were distinguished by unequal pupils, and by paralytic symptoms in the districts of the facial and hypoglossal nerves, are to be found under the head of *cured* after typhus, that the paralytic symptoms disappeared (Nos. 6, 7, 8, 9, 10 of the cured), and that even patients in whose cases there was ground for supposing a lesion of the spinal cord to be present (Nos. 1 and 3 among the improved), equally underwent a change for the better. The presence, too, of organic heart disease,

repeatedly confirmed (No. 6 and 7 of the cured) did not prevent recovery."

Dr. Nasse reasserts here his theory regarding this good result from typhus, viz., that the hyperæmias of the brain, so common in the insane, are counteracted by the anæmia which the fever brings in its train.

Dr. Zenken gives a case of percussion of the forehead proving useful by revealing enlarged frontal sinuses. As the man did not die, the diagnosis was not confirmed. There was a clearer sound over the sinuses which varied with the opening and shutting of the mouth.

Dr. Heinrich Cramer recommends what he calls the *vertical separation* (vertikale Trennung) of asylums. His plan is to have the day-room on the ground floor looking over the garden and towards the sun; behind the day-rooms should run a corridor, and on the other side of the corridor there should be some single rooms, also water-closets, sculleries, and baths, with one or two strong rooms (Isolir-zimmer). Above should be the dormitories and nothing else, and they would communicate by stairs with the day-room. Each department would thus be separate, except as regards the corridor, and both the corridor for the male and that for the female department should communicate with the kitchen. The Infirmary and the department for the "wet and dirty" should also, according to Dr. Cramer, be on the ground floor.

Dr. Frese argues for the identity of emotional nervous paths with those of the pains and pleasures of organic life. He founds the argument on the common subjective impressions which these feelings give (such as the sense of oppression at the heart, burning in the throat, loss of muscular power, &c.), and places the differentiation in the presence of certain ideas as the causes of the organic agitation in what we call emotion. He, therefore, considers that two different parts of the nervous system belong to the physical basis of emotion, namely, the centre that embodies ideas, and the nerve centres and paths that minister to organic pains and pleasures.

A case is given by H. Obersteiner of acute atrophy of the liver, with atrophy of the nerve tissue of part of the right side of the cerebellum. "Is there any connection between the two?" Dr. Obersteiner asks; and he quotes Laycock, Bernard, Wagner, and Schiff as having remarked on a connection between the cerebellum and the digestive organs.

In the Third Part of this Journal, for 1870, Dr. Flemming (Schwerin) has a paper entitled "A Fresh Discussion of an Old Question in Medico-Psychology." He commences with a reference to the rarity of complete cures in lunacy practice, as illustrated by the number of relapses. He insists on the necessity of removing in every case not only the mental disease but also any bodily defect that can be presumed to be connected therewith. He admits the difficulty of getting cases to stay in an asylum after they are mentally recovered. On the subject of the physical basis of the incurability of insanity, he refers to the researches of Wolff with the sphygmograph, and quotes that

author's conclusions :—" That those mentally diseased only exceptionally become healthy (gesund) again, and that diseases of the brain are only in rare and exceptional instances capable of being quite rooted out ; that they much rather leave behind them, in their neurotic (neuropathischen) basis, a seed out of which they can at any time again become developed."

At the same time Flemming holds that alienist physicians should not despair, but should devote their energies to increasing the number of the exceptions referred to by Wolff, and to increasing the length of the sane intervals. He concludes by warning the physician from using too freely such drugs as chloral hydrate, and morphia ; these, he says, may be made coercive means for body and soul both ; the old strait waistcoats took at worst only the body into bondage.

Professor Hagen (Erlangen) makes an attack on the tables proposed by the French Psychiatrial Congress of 1867, for universal distribution, and with the view of gathering together homogeneous statistics on matters of lunacy. He draws a grievous picture of the mountains of work that would have to be performed both for the preparation and for the comparison and final working up (to general principles) of these tables. He affirms that the French scheme errs in uniting statistics for the State and statistics for scientific purposes, and says that no congress has the right to impose tables on the whole world. He would have the arrangement of statistics for scientific purposes left over to the smaller associations of alienist physicians.

Stark's ingenious little paper on the " Secretion of Saliva in the Insane,"—Pelman's pleasant " Reminiscences of Journeys in England and France," and much other matter, want of space compels us to pass over. A good English asylum, with a " colony " attached after the manner of FitzJames (Clermont), is what Dr. Pelman thinks would be the model of an institution for the insane. Haywards Heath (Sussex County) Asylum is, to him, perfection, but for the want of the " colony."

In the Fourth and Fifth Parts of the Twenty-seventh Volume of the " Allgemeine Zeitschrift," there is a paper by Nasse, which excites interest, being his experience of the effects of the war of 1866 in producing insanity. He gives fourteen cases, and inclines to the opinion that the excitement of the war may of itself induce alienation, though the doctrine of the immense influence of such things on the number of the insane is, he says, dying out.

Dr. H. Reich brings forward cases to prove a common form of acute alienation among newly imprisoned criminals, and assigns the causes in the circumstances common to the condemned.

Dr. Wille declares against the beneficial influence of typhus on insanity.

In the Sixth Part of this Volume, Hergt writes on " Women's Diseases and Insanity," and Zenker on the " Mode and Mechanism of Voluntary Movements and General Paralysis of the Insane."

The two numbers before us of the " Archiv der Deutschen Gesell-

schaft für Psychiatrie und Gerichtliche Psychologie" do not present any paper of surpassing interest.

In the first number of the "Psychiatrisches Central-Blatt" of Vienna, we find a synopsis of a paper in the "Prager Viertel-Jahr Schrift," by Drs. Köstel and Niemetschek on the "Pulse of the Central Vein of the Retina in Epilepsy." Out of 250 individuals examined, corresponding to 468 eyes, the venous pulse was found in 36 persons and in 66 eyes. The *rationale* of it is said to be anæmia of the retina. In No. 2, the interesting observation of Heidenhain ("Pflüger's Archiv," iii., 10, 11) that stimulation of a sensitive nerve diminishes the temperature within the body, is referred to. The reason is the more rapid flow of cooled blood from the skin and lungs, by an impulse transmitted from the medulla oblongata. This little Journal is devoted to the narration of the proceedings of the Vienna Medico-Psychological Association, and, further, to synopses of noteworthy papers and cases, recorded in its bigger contemporaries.

Other Journals, and notably the "Irrenfreund," lie before us, but the space at our disposal prevents us noticing them on the present occasion.

3. Italian Psychological Literature.

By J. R. GASQUET, M.B. Lond.

In the numbers of the "Archivio," which have reached us up to July of this year, there are many interesting original articles and reviews, but our space, unfortunately, compels us to notice only those which seem most likely to interest our readers.

Dr. Castiglioni presents two reports, one on the working of the new asylum, at Mombello, in the Milanese, and a second on the asylums of that province in general. They furnish sufficient evidence for closing the old unhealthy La Senavra as soon as possible. The population of the two establishments being composed of the same class of patients, Dr. Castiglioni shows that the proportion of intercurrent bodily illness is 2 per cent. in the new asylum, and four times that amount in the old one; so, too, the annual mortality per cent. is 6 at Mombello, and 15 at La Senavra.

Professor Verga's lecture on the influence of celibacy on insanity was noticed in our last report; he has now published two more on the influence of the *married state* and of *widowhood*. His conclusions are based upon careful examination of statistics, and are well illustrated by cases. They mainly tend to show that the principal influences of matrimony, whether in predisposing to insanity or in protecting from it, are to be found in its results, such as a quiet and well-ordered life on the one hand, or the cares of a large family, or jealousy, on the other.

He also gives examples of the occasional occurrence of insanity in women as an immediate result of the first sexual intercourse; and he lays great stress on the production of general paralysis by the unrestrained sexual excess not unfrequent in married life, which he first learnt from a paper of Dr. Maudsley's in this Journal. He shows, from a careful examination of the private asylums in the Milanese, that the majority of the men, and all the women, suffering from general paralysis in these houses, are either married or widowed. As to widowhood, he shows that more than twice as many widows as widowers are to be found in the Italian, French, and German asylums; he accounts for this disproportion not, as is usual, by supposing that women are more easily affected by mental and bodily suffering than men, but by pointing out that this is exactly the proportion of widows to widowers in the whole population of Italy.

Dr. Brocca gives a full account, with a running commentary, of 1376 female patients who were admitted into the insane wards of the Ospitale Maggiore, at Milan, during the three years 1867-8-9. The whole paper is extremely interesting, but will not bear abridgement, and a few extracts must therefore suffice. The proportion of cures, 793, seems high, since a large number of patients admitted were suffering from that very intractable disease, pellagra; 5 cases of general paralysis only were noted, in four of these it is certain that the mental affection preceded any moter disturbance, and in the remaining case the order of appearance of the symptoms was doubtful. Dr. Brocca calls particular attention to the occurrence, in the later stages of these cases, of visual hallucinations, generally of a terrifying character, and very similar to those of *delirium tremens*, with which they appear to have been sometimes confused.

The use of *chloral-hydrate* seems to have been very carefully studied by our Italian *confrères*. Drs. Valsueni and Verga have published a series of experiments on its action and mode of administration, which are not devoid of interest, even after all that has been written on the subject. They consider that its effects are very similar to those of section of the cervical sympathetic in Cl. Bernard's classical experiment; that it produces, primarily, congestion of the optic thalami and corpora quadrigemina; and ultimately diminishes the heart's action, without any proportional influence on respiration and temperature. Besides the usual mode of administering the remedy by the mouth, they have also obtained all its effects by hypodermic injection (which produced considerable local inflammation), and by rubbing an ointment containing it into the skin. Injection into the rectum of chloral, mixed with decoction of starch, seems to have been equally successful, and attended by no disadvantages.

Dr. Monti has had (what is unusual) a certain number of cases of *auricular haematoma* among the female patients of the asylum at Pesaro. Some external violence was extremely probable, if not proved, in every case; the quiet patients, who had this symptom, being those

who obstinately refused their food, and whose ears had been apparently compressed in the efforts necessary for feeding them. But he points out that the violence would have been in many cases wholly insufficient to produce such an injury in a healthy part, and that there must have been, therefore, some predisposition in a permanent dilatation and fragility of the blood-vessels. The whole question is very analogous to the fracture of ribs, which occupies so prominent a place among ourselves.

Among the lesser items of news, it is particularly pleasant to see that a good deal is being done for the amusement and occupation of patients. At Sienna we read of a concert, given by the patients of the asylum for the benefit of a hospital for scrofulous children, and at many other asylums of entertainments of various kinds.

It is also very satisfactory to find that our *confrères* pay such close attention to what passes among us in England. Dr. Robertson's appointment as Chancery Visitor is the subject of a notice by Dr. Biffi, who congratulates us on the "conferring of such an important and delicate office on a person so well fitted for it." It is very natural that Dr. Biffi should not be able to understand our Lunacy Laws, seeing that we can hardly do so ourselves; but it is evident that he wavers between two views of the duties of a Chancellor's Visitor, and is not sure whether that official is deputed by the Chancellor to visit certain special asylums dependent on him, or whether he will have a general inspection of all the asylums in England. The appointment of the present Editors of this Journal, and Sir J. Clark's "Life of Conolly," are also the occasion for friendly notices, which show how carefully the progress of our specialty is watched in Italy.

We have received the first six numbers of a new "Review of Prison Discipline,"* which is to be published monthly, and which will deal with the important and various questions connected with the correction and reformation of criminals, and will also give an official report of all judicial and administrative acts in Italy. The Review appears to be excellently conceived, and to supply a real want, even out of Italy, for existing periodicals of the kind deal rather with mere matters of practical detail than with general principles. As the Editor states in his preface, there are many points where the study of madness and the study of crime touch; so that we are enabled, even from the numbers before us, to refer to several matters of interest to our readers. Thus Professor Girolami, the chief-physician of the Roman Asylum, draws an interesting parallel between habitual criminals, especially those convicted of small offences, and such insane patients as readily lose their reason, and easily recover, ending usually in one of the chronic incurable forms of insanity. Both these classes of persons have small, or abnormally shaped, heads, and Professor Girolami has noticed as particularly frequent, especially among women, a flatness of the

* *Rivista di Discipline Carcerarie.* Firenze Tip: Cenniniana, 1871.

occiput; "the occipital bone, instead of being convex, is quite flat." The idea of this paper was suggested by Dr. Wilson's account of "Moral Imbeciles," read before the British Association.

Professor Lombroso examines the statistics of insane criminals in Italy, which he shows to be untrustworthy, and also describes a means of feeding criminals or lunatics who refuse their food, which has been employed with success for two years in his own asylum and at Milan. It is simply a semilunar piece of leather, which completely closes the mouth, food being then poured into the nares through a narrow tube.

A quarterly journal, the "Archives of Anthropology and Ethnology,"* has been published at Florence since the beginning of this year. This does not appear to have any official connection with a society, recently established in Italy, for the study of the same subjects, but seems to be the property of the Editors, who are, Professor Mantegazza, known in England for his researches on coca, and Dr. Finzi, an orientalist of some repute. The typography and engravings are equal, if not superior, to our very best English periodicals; the scientific value of the matter they convey and illustrate seems very variable. The Editors make an opening statement of their views, which are Darwinian and materialist in the extreme, and this produces an air of narrowness and dogmatism, which hardly suits "libres penseurs." The philological and ethnological parts of the review seem to be of little value; but there are some papers of Dr. Mantegazza's which are of considerable importance and interest. In one, he suggests a new means of easily ascertaining the "cephalo-spinal index;" that is, the proportion between the bulk of the spinal cord and that of the encephalon.

His process, suggested by a passing notice of Broca's, is a simple one, although requiring some patience. He ascertains the capacity of the cranium in the ordinary manner, and then takes the area of the occipital foramen, by carefully filling it with rods of gauged sizes, and taking the sum of these. He gives a long series of observations which he has made, and which he has reduced to uniformity by giving their proportional value when the area of the occipital foramen=10. This variable number will be, of course, higher or lower, according as the cranium is of greater or less capacity relatively to the area of the foramen; and its height would appear to be one of the most prominent characters of the human cranium, the highest number found in any of the anthropoid apes (8.35 in a young gorilla), being considerably lower than the lowest in man (18.48). The mean of 100 human crania gave 19.19 (males 19.65, females 18.48). The importance of this test in the different races of man requires to be tested by further examination.

A similar comparison between the capacity of the cranium and the

* Archivio per l'Antropologia e l'Etnologia, Firenze, Via Venezia, 12.

orbits has led to equally interesting results, which have been worked out with marvellous patience, from the examination of 316 crania. Here again the difference between the human and simian skulls is very great; in the ourang the capacity of the two orbits is to that of the cranium as 1:7, while the lowest proportion in any human skull of ordinary size is 1:20, and even such a low proportion as this is very rare. The proportion is higher in women and in children than in men.

Dr. Lombroso relates a curious malformation of the occipital bone in the cranium of an habitual criminal. A deep and broad fossa occupied the place of the internal occipital crest, bordered by two osseous ridges, which converge to a point just posterior to the occipital foramen. These ridges must have corresponded to a double falx cerebri, thereby pointing to a state of the brain like that of the fetus, about the fourth month of intrauterine life, and of the permanent condition of the lemuriids.

Dr. Tebaldi has published some interesting researches on the use of the *ophthalmoscope* in insanity and its allied affections. There is, unfortunately, no space to do more than sum up his principal conclusions.

In *epilepsy* there would appear to be an habitual dilatation of the capillaries, and, immediately after a fit, contraction of the small arteries and fulness of the veins. In *general paralysis* the appearances vary according to the stage of the disease; they consist of hyperæmia, cedema, exudation, and atrophy of the optic nerve; in fact, all the characters of inflammation. In these two forms of disease, out of the 20 cases of each that were examined, only one supplied no evidence of alteration in the eye; but as might be supposed, this is less constant in *ordinary insanity*; of 80 such, 19 gave purely negative results, and these were cases of all kinds. In the remaining 61, where morbid appearances were observed, hyperæmia of the papilla and dilatation of the arterioles were found to co-exist with acute mania; venous congestion, with a varicose and tortuous condition of the vessels, corresponded to dementia and to old-standing cases of all kinds. In idiots the retina appeared anæmic, and the vessels small; and in alcoholism the venous congestion of an early stage leads to permanent enlargement and distortion of the vessels.

Several of the pamphlets received are concerned with a "cause célèbre," which was tried at Naples in March of this year. A lady, Signora Teresa Santoro, was placed by her husband, Cav. de Martino, in an asylum in the spring of last year; two of her brothers thereupon appealed to the law on her behalf, and the public prosecutor, after an examination of the patient, without any professional assistance, ordered her discharge, and commenced an action against the husband for improper confinement in an asylum. Unfortunately, two ordinary medical men consulted, certified to the sanity of the lady, and

finally the court gave sentence against the husband, who has appealed to a superior court. All the specialists consulted were of opinion that the lady was insane; and one of them, Dr. Miraglia, who was for so many years director of the great asylum at Aversa, has published a very detailed account of the case, from which anyone conversant with insanity could only draw the same conclusion. The case was one of ordinary melancholia, with ideas of persecution particularly prominent; the lady had other members of her family insane, and had herself been undeniably so once before. In fact, the only point on which the court relied, was that the patient was coherent in her language, and retained her memory. Dr. Miraglia has written at great length to show that this is not inconsistent with insanity; it is to be hoped he will be more successful in convincing Italian jurists and the public than we generally are in England.

In this very inadequate account of the progress of Italian psychological literature, no mention has been made of the most important contribution it has received, viz:—Professor Lombroso's *Treatise on Pellagra*. This work is of so much merit, and is so extremely suggestive to all students of mental diseases, that it is proposed to give our readers a separate analysis of some portions of it.

PART IV.—NOTES AND NEWS.

Proceedings of the Twenty-sixth Annual General Meeting of the Medico-Psychological Association, held at the Royal College of Physicians of London (by permission of the President and Fellows), on Thursday, August 3rd, 1871, under the Presidency of HENRY MAUDSLEY, M.D., F.R.C.P.

AGENDA:—

- I. Meeting of the General Committee, at 10.30 a.m.
- II. Morning Meeting of the Association, at 11 a.m.
 1. Dr. Boyd will resign the Chair to Dr. Maudsley.
 2. Appointment of Officers.

GENERAL BUSINESS OF THE ASSOCIATION.

The following Notice of Motion has been received:—

- a. Dr. J. B. Tuke will move that, as it has been recognised as a general principle of this Association that its Members shall not be restricted to those connected with the Specialty, and that it is advisable to enlist the interest of the professional and general public in its objects, this Meeting deems it expedient to appoint six local Secretaries for England, one for Scotland, and one for Ireland, with the view of carrying out the principle.

- III. Afternoon Meeting of the Association, two o'clock.

Address by Dr Maudsley, who will propose for discussion:—

- a. The prevention of Insanity.
- b. The treatment of the insane in private houses and in asylums.
- c. The use and abuse of Sedatives in the treatment of Insanity.

The following Members of the Association were present:—

Dr. Bucknill, Lord Chancellor's Visitor in Lunacy, Dr. T. N. Brushfield, Dr. Rhys Williams, Dr. Christie, Mr. Mould, Dr. Paul, Dr. Maudsley, Dr. Hewson, Dr. Stewart, Mr. Wickham, Dr. Sutherland, Dr. Boyd, Dr. Rogers, Dr. Nicolson, Dr. Arlidge, Dr. Fowler Bodington, Dr. Davey, Dr. Fielding Blandford, Dr. Thurnam, Dr. Monro, Dr. Williams, Dr. Wood, Dr. Stanley Haynes, Dr. Clouston, Dr. Sabben, Dr. Yellowlees, Dr. Strange, Dr. Sankey, Dr. T. Wilkins, Dr. Tweedie, Dr. Haviland, Dr. Manning, Mr. Hall, Rev. J. Smallpeice (visitor), Dr. Langdon Down, Dr. Clement Daniel, Dr. Jepson, Dr. Hughlings Jackson, Dr. H. Stilwell, Mr. Edwd. H. Byas, Dr. Hunt, Dr. Tuke.

Dr. BOYD, the retiring President, said—In relinquishing the office of President to Dr. Maudsley, the distinguished physician whom the Association has elected to succeed me, I beg to acknowledge the kind and valuable services of Dr. Tuke, as secretary, and Dr. Paul as treasurer, and to return them both my best thanks. At the last annual meeting held at this College, on the 2nd August, 1870, I called attention to the unsatisfactory state of the Lunacy Acts regulating Pauper Asylums, and a committee was then appointed "To examine the lunacy laws of the continental states of Europe and of the United States of America, and to report thereon to this Association, with recommendations for the adoption of such of them as may seem desirable additions to or amendments of the laws in force in the United Kingdom." A meeting was held in London, on the 18th of last April, at which meeting it was moved, seconded, and agreed to, "That the Lunacy Laws of the following countries viz., (for which we are indebted to Dr. Sibbald), "France, Holland, Belgium, Geneva, Norway, and Sweden, having been obtained, it is desirable that a complete collection of foreign Lunacy Laws should be obtained before anything satisfactory can be done. It therefore appears to the committee that a grant should be applied for from the Association, so that enquiry may be efficiently pursued." The laws relative to lunatics differ in each of the three kingdoms, and as this Association includes members from each, it would be very desirable to bring the laws into accord. In conclusion, I would express a hope that the Association may, by the cordial co-operation of all its members, in this, as well as in all other questions, recommend what is practical and beneficial for those placed under their care, and also promote amongst medical students a knowledge of Insanity. Before leaving the chair I beg to acknowledge, with many thanks, the kindness and favour shown me by this Association, and at the same time to express my cordial wishes for its continued prosperity.

Dr. MAUDSLEY then took the chair. He said—Permit me, in assuming the honourable position to which you have elected me, to tender you my most hearty thanks for the honour you have conferred upon me, and to beg to assure you I shall do my best during the next year to promote the interests of the Association.

The minutes of the last annual meeting were taken as read.

The PRESIDENT—The first business is the consideration of the place of meeting for next year, and in reference to that Dr. Tuke has received a letter from Dr. Lalor, which he will now read to you.

"Richmond District Lunatic Asylum,

"Dublin, 29th day of July, 1871.

"DEAR DR. TUKE,—So many royal and official personages, and visitors of distinction and note, will be here next week that it would be scarcely right for one in my position to be absent from his post, and I must, therefore, forego the great pleasure it would give me to attend your meeting of the 3rd.

"I trust that Dublin will be selected as the place of meeting for next year, and I think I can promise for our specialty, for the profession at large in Dublin, and for myself, that we will all give the Association a hearty welcome.

"Should Dublin be selected as the place of meeting, I think there could not be a better or more appropriate President than Dr. James Duncan, and I have had a letter from our friend the Secretary for Ireland, Dr. Robert Stewart, this morning expressing his satisfaction that Duncan should be the man. Stewart expects to attend your meeting, and as he is quite *au courant* with us all in Ireland, you cannot want a good adviser as to all Irish questions.

"Should you wish to have any further information from me I shall be happy to give it on hearing from you.

"Yours faithfully,

"JOSEPH LALOR."

"Dr. Harrington Tuke,
"37, Albemarle St., London."

Dr. STEWART—With reference to that letter, which has now been read, I may say Dr. Lalor is the leading man connected with the profession in Dublin, and we have no second opinion amongst the medical superintendents of public institutions about the meeting of 1872 being in Ireland. Nine or ten years have elapsed since the Association met in Dublin. Then with reference to the President, we consider there could be no more efficient person than the gentleman mentioned in the letter, —Dr. Duncan. He is a most respectable member of our specialty and of the profession generally. We shall be disappointed if the Association will not meet there, as Dr. Lalor has stated, and if you come I know you will receive a very cordial reception.

The PRESIDENT—I may say, in reference to this question, that I have received some communications from Scotland; one from our honorary secretary there, and another from Dr. Skae, expressing a hope that we may meet in Edinburgh next year. Dr. Batty Tuke, our very energetic secretary for Scotland, writes to say if we will come, it will be a great gratification to the Scotch members, that he will promise us a successful meeting, and what is of considerable importance, especially in the eyes of our treasurer, a considerable number of new members. I have also received a letter from Dr. Skae, endorsing the opinion of Dr. Batty Tuke, and expressing great gratification at the suggestion that the next meeting of the Association should take place in Edinburgh. We have met in Edinburgh since we met in Dublin, certainly; but it is now five years since we met in Edinburgh, and the Scotch members constitute a very valuable section of the Association. It will remain with the members to determine the place of meeting for next year.

Dr. WICKHAM—Can you inform me how many Irish members there are in the Association?

Dr. STEWART—Twenty-seven.

Dr. WICKHAM—Can you tell me what is the ordinary proportion of articles contributed to the Journal from Ireland?

The PRESIDENT—I am afraid we have had very few from Ireland lately, but we hope to have more in the future.

Dr. BOYD—I will propose that Dublin be the place of meeting next year.

Dr. WOOD—I will second it.

Mr. MOULD—Looking to the results as you state them—that Scotland is the most important part as affects the Association, both with regard to the Journal, the number of its members, and what they have done for the Society, I beg to propose that Edinburgh be the place for the next meeting.

Dr. HAYNES—I beg to second the proposition. I think it is only due to the Scotch members, who have lately done so much to work up the Association in that part of the United Kingdom, that we should have our Association meeting there next year.

Dr. STEWART—A question has already been asked with reference to the number of members for Ireland. I would like to know what is the number of ordinary members for Scotland, and also the articles that have been contributed to the Journal.

Dr. PAUL—They contributed £46 to the Association last year; there must be about 40 members.

Dr. CHRISTIE—To settle the difficulty, I propose that we meet next year in London. I think we have heard very good reasons for meeting both in Dublin and Edinburgh, but there are additional ones why we should meet in London. Five years ago we met in Edinburgh, and two years ago in York; we had Dr. Laycock as President, as a compliment to Scotland.

Dr. BLANDFORD—I will second that.

The question was then put to the vote, and Edinburgh was selected as the next place of meeting.

Dr. ROGERS—I would propose that the President shall be Sir James Cox, the Senior Commissioner in Lunacy of Scotland. I need not say that in offering him the Presidency of our Society, we honour ourselves in an equal degree to the honour we confer upon him, if, indeed, we do not derive the greatest honour from the appointment. Sir James Cox is Senior Commissioner for Scotland, and independently of that he is a gentleman very well known by his writings and his works, which are doubtless well known to the members of the Association as they are to myself; and he also has made himself thoroughly acquainted with the different systems abroad as well as at home; and there is another advantage, as it appears to me, with an official personage, such as Sir James Cox, that for the time being he descends, as it were, from his lofty pedestal as Commissioner, and meets us on the same platform as ourselves. I think great benefit would accrue both to the Society and also to the Commissioners as a body, to have more frequent intercourse between the Commissioners,

the paid Government Inspectors, and the members. Also, Sir James Coxe may be looked upon as a representative man, as being so much in favour of the system of boarding-out patients in cottages and so on. We English members can only wish, one and all of us, to see this system have a fair trial, and certainly the sister country offers much more advantages for such an experiment than this country does. I beg, therefore, to propose that Sir James Coxe be elected, and I hope the meeting may be unanimous on the subject.

Dr. WOOD—I shall be happy to second that.

Dr. STEWART—Is there a certainty of Sir James Coxe accepting it? There can be no second feeling with reference to Sir James Coxe, but in a matter of this kind, it occurs to me whether or not it is the right way of proceeding to pass by the medical superintendents, and to place a Commissioner over their heads.

The PRESIDENT—There can be no question in the mind of any member present that it would be an exceedingly desirable thing to have Sir James Coxe, and if we are only sure that he will accept it, we shall be delighted to elect him unanimously. It must be said, however, that he has not been communicated with with regard to this matter.

After a few further remarks, the question was put to the meeting, and Sir James Coxe was unanimously elected President for the coming year.

Dr. BOYD—I beg to propose Dr. Paul as Treasurer.

Dr. RHYS WILLIAMS—I will second that.

Agreed to.

Dr. BOYD—I propose that Dr. TUKE be re-elected as General Secretary.

Dr. STEWART—I will second that.

Agreed to.

Dr. TUKE—I am very much obliged to the Association for the honour they have done me, and I hope, in any error I may commit, that they will believe that I intend to treat my fellow members with every possible courtesy, and to show in every way the high distinction I think they confer upon me by their kindness.

The PRESIDENT—The next business is to elect the Secretary for Scotland. In reference to that I must say I received a letter that I am very sorry to have received from Dr. Batty Tuke, who is our extremely valuable Secretary, sending in his resignation; but it seems to me it has been done under some misunderstanding which a little explanation will clear up, and that Dr. Batty Tuke may then be induced to accept the office again for another year. I am sure I heartily hope he will, for a more valuable Secretary it would be impossible to have. I hope some one will propose Dr. Batty Tuke's name, and that we shall elect him unanimously.

Dr. TUKE—Perhaps I may be allowed to have the pleasure of proposing Dr. Batty Tuke myself. Since he has been elected Secretary we have had a great impetus to our meetings, an enormous accession of members, and a great many interesting papers contributed by the quarterly meetings held under his auspices, and I am perfectly sure no more valuable officer of our Association has been, or perhaps will be, than Dr. Batty Tuke.

Dr. CLOUSTON—I have much pleasure in seconding that. Speaking as a northern man, I must say we could not get on without Dr. Batty Tuke. He organises our meetings, and beats up recruits by the dozen. He manages the accounts in the most admirable way, and altogether he is perfectly invaluable to the Society in the North.

Dr. STEWART—As a question of order, I would ask is not that putting Scotland before Ireland. Many years before ever there was a Scotch Secretary, Ireland had a Secretary. I think the Irish Secretary should be elected first.

The PRESIDENT—I have been obeying the behests of the Secretary, who has put down things in that order. However, it can easily be remedied.

Mr. MOULD—I propose that Dr. Stewart, who has so ably filled the office of Secretary for Ireland for so many years, be the Secretary for Ireland for the ensuing year.

Dr. RHYS WILLIAMS seconded the motion, which was agreed to.

Dr. STEWART—I beg to thank you. I think I am one of the few original members of this Association. I am certainly senior of all here present. I believe our Association was formed in 1842 or 1843, and I have been Secretary for Ireland for nearly thirty years. I shall be very glad to continue the office, and as far as lies in my power to extend the usefulness of the Society, and I hope for the future that more papers will be provided from Ireland.

Dr. Batty Tuke was then elected Secretary for Scotland.

The PRESIDENT—The next point is the Editors of the Journal.

Dr. CHRISTIE—I beg to propose that the present Editors be continued.

Dr. BOYD seconded the motion, which was agreed to.

The PRESIDENT—The next business is the appointment of an Auditor. One auditor, Dr. Hughlings Jackson, retires in the natural order of events, and it will be necessary to appoint some one to supply his place.

Dr. TUKE—I beg to move that Dr. Arlidge, if he will take the office, be appointed Auditor. The object of that is, as Dr. Arlidge retires in rotation from the Council, by this means we shall be able to secure his services on the Council next year, which I think will be very valuable. I beg to move Dr. Arlidge's name as Auditor.

Dr. SANKEY seconded the motion, which was agreed to.

The PRESIDENT—Now we come to the appointment of the Council. In the natural course of events three gentlemen retire, who have been longest upon the Council, Dr. Munro, Dr. Campbell, and Dr. Arlidge; it will be necessary to replace them by three other gentlemen.

Dr. TUKE—I beg to propose Dr. Clouston and Dr. Blandford.

The motion was seconded by Dr. RHYS WILLIAMS, and agreed to.

Mr. MOULD—I propose Dr. Rogers, of Rainhill.

Dr. CLOUSTON seconded the motion, which was agreed to.

Dr. STEWART—I think it is desirable that there should be a regular period of the year when the names of the members should appear in the Journal; suppose you say in October. I therefore propose that for the future the names of the members of the Association be printed in the October number of the Journal.

The PRESIDENT—I think the resolution is a very desirable one.

The resolution was seconded and agreed to.

Dr. TUKE—We now come to the election of honorary members, and I have a list proposed in order by six members of the Association, of the following gentlemen: John Butler, M.D., of the Retreat, Hartford, Connecticut, whose name will be familiar to the Association, from his having come over here 15 years ago as the representative of the Medico-Psychological Association of America. The next name is that of Professor Christison, whom we all know; and then there is Dr. Arthur Mitchell, M.D., the Commissioner for Scotland. Those names are proposed by Dr. Batty Tuke, Dr. Clouston, Dr. Wood, Dr. Boyd, Dr. Maudsley, Dr. Christie, Dr. Brushfield, Dr. Rhys Williams, Dr. Wolfe, of Nova Scotia, Dr. Tuke, and Dr. Robert Stewart. If it is the pleasure of the meeting, I will propose that these gentlemen be elected honorary members.

The PRESIDENT—Some slight irregularity has occurred in this matter. The names of Professor Christison and Dr. Mitchell were submitted at the last annual meeting, notice in that way being duly given of their names as persons to be elected. It appears that from some misunderstanding their names have not been put on the agenda calling the meeting, as in fact by law is ordained. The law is that gentlemen, whether of the medical profession or otherwise, who are distinguished by the interest they take in the treatment of the insane, be eligible for election as honorary members, the election to be by ballot, as in the case of ordinary members, at least a month's notice having been given of the names to be proposed to the secretary, who will append them to the circular by which the annual meeting is summoned. As a matter of fact, their names have not been put upon the agenda of the annual meeting; and the question I shall have to submit to the Association is, whether under those circumstances, they will proceed to elect them? There can be no question of the desirability of electing these distinguished men, and it is from a misunderstanding that their names have not been duly entered on the agenda.

Dr. ROGERS—I beg to propose on this occasion, as the forms appear to have been all complied with, with the exception of a little omission on the part of the General Secretary, that for the time being, and on this occasion only, the standing orders be so far suspended that we proceed at once to the election of these distinguished gentlemen, so that an apparent slight shall not be put upon them by not electing them; and also that the feelings of the gentlemen who have proposed them and backed the nomination be not wounded; and I hope by that means any kind of feeling that has been caused in the matter between the secretary and the friends of those gentlemen may be alleviated.

Dr. TUKE—I beg to second the suspension of the standing orders, and wish to explain in two words the reason why they were not put on the agenda. It has not been the custom of late years to put any member on the agenda for election if due notice has been given, unless they have consented themselves personally to stand their election by ballot; it having been found inconvenient to propose members for

election who might be black balled. For that reason it has been the custom of late years not to propose anyone except as we have done to-day, trusting that the standing orders would be suspended whenever it was necessary.

Dr. CHRISTIE— I think, sir, there is no necessity for suspending the standing orders at all. I am rather a stickler that we should keep as closely as we can to the rules, without suspending standing orders. I think in this case there is no difficulty. The month's notice has been given, and supposing the secretary came forward and said he forgot all about it, is that to vitiate the election of honorary members? The rule does not state that his not putting them on the circular shall vitiate the election; it is left to the free will of the secretary, "who will append them;" it does not say he "shall" append them. I think it will be the easiest way of getting over the difficulty not to break our rule, but to take the rule in its free sense.

Dr. RHYS WILLIAMS— I think if that "will" is not a "shall," it ought to be altered to "shall," for the future.

Dr. CHRISTIE— The next rule says "shall," so that if it is an accident, we have a right to take advantage of the accident.

The PRESIDENT— It appears to me the rule is intended to be "shall," and as we are going to consider the rules presently, perhaps we shall think proper to alter it to "shall," now that Dr. Christie has pointed out this defect.

The resolution for the suspension of the standing orders was then put to the meeting and agreed to, and the ballot taken for the names of the three gentlemen, Dr. Butler, Dr. Christison, and Dr. Mitchell.

The ballot having been taken, the three gentlemen were found to be unanimously elected honorary members.

The PRESIDENT— The next business is the election of the ordinary members.

Dr. TUKE— I have to propose the following list for England :—

Manning, F. Norton, M.D., Inspector of Asylums, New South Wales.

Allen, Dr. T., M.D. St. And., L.R.C.S. Edinburgh, Medical Superintendent, Jamaica Lunatic Asylum.

Dove, W. Watson, Esq., M.R.C.S.E., Assistant Medical Officer, County Asylum, Wells.

Greene, Richard, Esq., L.R.C.P., Edinburgh Assistant Medical Officer, County Asylum, Haywards Heath.

Ingels, Dr., Hospice Guislain, à Ghent.

Hingston J. Tregellis, M.R.C.S., England, Medical Superintendent, North Riding Asylum.

Long, C. F., Esq., Medical Superintendent, Ipswich Borough Asylum.

Marsh, James Welford, Esq., M.R.C.S. England, L.S.A., Assistant Medical Officer, County Asylum, Lincoln.

Reed, N. W., M.D. Edinburgh, Medical Superintendent, Scottish National Institute for Children, Larbert by Falkirk.

Reed, Cartwright, M.D., Munster House, Fulham.

Robertson, Alexander Esq., M.D., Medical Superintendent, Ararat Asylum, Victoria, Australia.

Sutton, Dr., Assistant Physician, London Hospital.

Ward, J. Bywater, Esq., M.B.S.B.A. Cantab, Assistant Medical Officer, County Asylum, Warwick.

Wade, Willoughby Francis, M.B., The Temple Row, Birmingham.

In addition to these, there are the Scotch members to be proposed, and the Irish members, making altogether about thirty-two new members.

Dr. STEWART— The largest number we have ever had. The list for Ireland is :—

Gelston, Dr. R. P., Assistant Medical Officer, Clonmel District Hospital for the Insane

Griffin, Dr. L. F., Visiting and Consulting Physician, Killarney District Hospital for the Insane.

Murphy, Dr. Walter W., Resident Physician, Killarney District Hospital for the Insane.

Merrick, Dr. A. S., Assistant Medical Officer Cork District Hospital for the Insane.

Pim, Dr. F., Resident Physician, Lucan Institution for the Insane and for Idiots.

Dr. CLOUSTON—I received a letter from Dr. Batty Tuke, the Secretary for Scotland, in which he regrets his absence, and requests me to propose the following list of members :—

“Fife and Kinross District Lunatic Asylum, Cupar.
“July 28th, 1871.

“DEAR DR. CLOUSTON,

“As it is extremely unlikely that I can get to London for the meeting of the Medico-Psychological Association, will you oblige by proposing the following list of gentlemen as Members.

“I am yours very truly,

J. BATTY TUKE,

“Dr. Clouston.”

“Hon. Sect. for Scotland.

G. H. Thoms, Esq., Advocate-Sheriff of Orkney, Caithness and Ross, 52, Great King-street, Edinburgh.

Dr. Oswald Bell, Professor of Medicine in the University of St. Andrews, The Scores, St. Andrew's.

G. H. Pagan, Esq., Clerk to District Lunacy Board of Fife and Kinross, Cupar, Fife.

James Dewar, M.D., Kirkcaldy, Fife.

Francis Troup, M.D., Auchtermuchty, Fife.

W. W. Ireland, M.D., Med. Supt. of the Larbert Institution for Idiots, Stirlingshire.

Francis Cadell, M.D., 4, Buckingham Terrace, Edinburgh.

Dr. King, Assistant-Physician, County Asylum, Macclesfield, Cheshire.

C. A. E. Sheaf, L.R.C.S., and L.R.C.P., Edinburgh, Assistant-Physician Royal Asylum, Edinburgh.

The CHAIRMAN—In addition to that list I have just received from Dr. Wood the name of Dr. Sutton, of Finsbury-square, Assistant-Physician to the London Hospital.

Mr. MOULD—I have to propose Dr. Matthew Wilkinson, Dr. William Roberts, and Dr. Henry Simpson, Physicians to the Manchester Infirmary and Lunatic Hospital.

The ballot was taken, and the above-named gentlemen were found to have been unanimously elected members of the Society.

Dr. PAUL presented the Treasurer's Report (*see next page*).

Dr. WOOD—I think we have omitted one part of our usual proceedings, and that is, to return thanks to the President who has just left the chair. We all know the high position Dr. Boyd has occupied for many years; and the satisfactory way in which he performed the duties of his office at least requires an acknowledgment of his services. I have the pleasure to propose “that the thanks of the Association be given to Dr. Boyd for the able manner in which he performed the duties of President last year.”

Dr. MONRO seconded the motion, which was unanimously adopted.

Dr. CLOUSTON—Is it not as necessary to return a vote of thanks to the other officers of the Society, who have served us so well during the past year? I think the Editors of our Journal, who take so very much trouble, the General Secretary, the Local Secretaries, and others deserve a vote of thanks at our hands as much as the President. I beg, therefore, to propose a vote of thanks be given to the other officers of the Association.

The motion was seconded and agreed to.

The PRESIDENT—The next business is a letter from Dr. Batty Tuke, with regard to a motion which he had placed on the agenda, but which he is unfortunately not here to support.

The letter was read :—

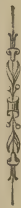
“Fife and Kinross District Lunatic Asylum, Cupar,
“July 24th, 1871.

“DEAR DR. TUKE,

“Most reluctantly I am compelled to give up all hope of attending the General Meeting of the Medico-Psychological Association; important changes in the staff of my asylum render it impossible for me to go far from home. Consequently, the motion I have given notice of must be postponed till the General Meeting of 1872, when I propose to bring it forward, unless the suggestion I make further on meets with approval from the Association on the 3rd prox.

“The object I had in view was, to increase the membership of our Association. It is utterly out of my power as Hon. Sec. for Scotland, and, all the more so, out of yours as General Secretary, to beat up recruits, or to enlist the sympathies of those

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.



The Treasurer's Annual Balance Sheet, July, 1871.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
To Balance Cash in Hand	...	58 15 1	By Annual Meeting	...	26 6 2
To Subscriptions received	...	151 15 0	By Editorial Expenses	...	5 5 0
By Secretary for Ireland	...	34 13 0	Printing, publishing, engraving, and advertising Journal	...	225 10 0
By Secretary for Scotland	...	46 4 0			
By Sale of Journal, Messrs. Churchill...	...	68 14 0	Sundries—		
			By Printing Circulars, &c.	...	0 10 6
			By Treasurer	...	3 3 0
			By Secretary for Ireland	...	1 1 7
			By Secretary for Scotland	...	8 18 6
			By General Secretary	...	6 6 0
			By Balance in Treasurer's hands	...	83 0 4
	£360	1 1		£360	1 1

Audited and found correct,

G. W. MOULD.

T. N. BRUSHFIELD.

ROYAL COLLEGE OF PHYSICIANS, August 3rd, 1871.

interested in the objects of our Society. There is a strong interest springing up in the medical profession with regard to the study of insanity, and the law is not very far behind—visiting justices, members of district boards, and others of the general public connected with the management of asylums, or interested in the well-being of the lunatic, would, if it were fairly put before them, join our Association. I feel certain that the appointment of a few energetic local secretaries, who would undertake the duty of pressing the objects of the Medico-Psychological Association on the attention of those so interested, would, in a very short time, double our list of members. The motion implies no innovation in the theory or conduct of the Association; for, some years ago, it opened its portals to all and sundry. All I desire is that this liberal step should be rendered effective and effectual. By increasing our membership from the ranks of the medical public, we would secure most important sympathy and co-operation in our work, and by drawing towards us members of the general public, we would help to dissipate the superstitions which still hang about lunacy and lunatic asylums. Through the influence of our Journal we would diffuse a knowledge of the dire diseases we are called on specially to treat, diseases which receive no direct recognition from our medical schools. Perhaps the most important object of my motion is to break down the idea that we form a close specialty, that we do not consider ourselves as an integral portion of the medical community. Nothing can serve to remove this fallacy so well as an earnest endeavour on our part to enrol on our list of members the ‘general practitioners.’

“As I can hardly hope that my motion will be at once adopted by the Association, I beg to suggest that a committee be appointed to consider the objects of said motion, to report to the general meeting of 1872. I would propose as members of the committee (should its appointment be acceded to) the President (Dr. Maudsley), Drs. D. Skae, Lockhart Robertson, Brushfield, Clouston, Deas, and Harrington Tuke, in addition to such others as the meeting may appoint.

“I am, dear Dr. Tuke,

“Yours very truly,

“J. BATTY TUKE.

“Dr. Harrington Tuke, Genl. Secretary of the Medico-Psychological Association.”

ALTERATION OF THE RULES.

The PRESIDENT—The subject of Dr. Batty Tuke’s motion may properly come under consideration in the discussion on the “Rules,” which is the next business. At a former annual meeting a committee, of which Dr. Arlidge was the secretary, and Dr. Laycock the president, was appointed to consider the rules of the Association, and to draw up a report and make suggestions for alterations. That is now before me, and I shall call upon Dr. Arlidge to make a motion with regard to it. It seems to me that the best plan will be to consider it paragraph by paragraph.

Dr. CLOUSTON—May I ask if it will be competent to move as an amendment to any of those propositions of the committee something that will include Dr. Batty Tuke’s idea.

The PRESIDENT—Quite so.

Dr. ARLIDGE—I think Dr. Clouston will find that Dr. Tuke’s views have been met very much by the first suggestion for an alteration of rules made by this committee. It is to this effect: Rule 3, as it stood, was “That the Association of the Medical Officers.” The committee have suggested a slight alteration of this, which makes it even more comprehensive, and which I think will entirely meet the views put forward by Dr. Tuke, “That any gentleman interested in the study of mental science, or in the treatment of insanity, be eligible for election as an ordinary member of the Association.” I think that will bring anybody in Great Britain into the Association.

The PRESIDENT—The question is whether this Association shall be open to medical men and others. I may say that some eight years ago we had this very question raised for discussion, as to whether we should continue to be as we are at present, a medical and scientific society, or should admit members interested in any way in psychological questions. There are arguments on both sides. You will have to bear in mind, if you do admit members of that kind, you are very likely to get what I may call a peculiar class of members. I have had letters from two or three people asking whether they could not be admitted members of the Association. They are persons, who, to say the least, have peculiar views—Swedenborgians and Spiritualists, and people of that class—some of whom have thought that they might enlighten us very

much if they could come and read papers here. Now, it will be a question whether it is desirable to admit members of that class, and whether, if you do, there are not many such likely to come and destroy the present character of the Society. I shall be happy to hear any observations on this question.

Mr. MOULD—I will move that this paragraph of the report be approved of.

Dr. TUKE—I should like to ask one question of the mover of this proposal. Dr. Arlidge says in rule three, "Any gentleman interested in the study of mental science." In the next paragraph he says, "every person." Does he mean to include ladies?

Dr. ARLIDGE—No; we can substitute the word "gentlemen" in that clause.

Dr. TUKE—Then I shall be happy to second it, in order to bring the question to an issue.

Dr. WOOD—Would not this proposal exclude some persons whom you wish to introduce to the society? There are medical men who say they are not particularly interested in the study of mental science except so far as every man is. One does not quite see the object of that restriction. Is not it better to leave it open to any member of the medical profession to become a member? You have a right to assume that as a medical man he is interested in mental science. We seem, by the wording of this rule, to make this a very exclusive society.

Dr. ARLIDGE—It is merely saying if any gentleman is sufficiently interested in the object of our Association to join it, he may.

Dr. WOOD—It still implies that a medical man, being in practice, is not necessarily interested in the study of mental science. I do not think we ought to put forward any rule which seems to imply that, because every man practising his profession must and ought to be interested in the study of mental science. It appears to me we are really trying to make ourselves specialists, to our disadvantage, as I believe.

Dr. NICHOLSON—As there are a very few here who do not belong to your speciality, I think, perhaps, a few words to the meeting as to what induced me to join the Association may not be out of place. In the convict service a great many men are so closely allied to your department that really the two blend together—the criminals and the insane. A great number of men who come from asylums come to a convict prison, and a great number who have been in convict prisons go to asylums. It was because this Association was open to the general faculty that I asked to become a member, and I think if you extend it, not only to those in the civil service, but to others, it would be a great advantage, not only on the mere question of insanity, but to the whole objects of the Association, because you desire to derive benefit from the study of mental disorder, or mental conditions of any form.

Dr. MUNRO—I do not understand whether the motion is to ask the other medical members of the profession, outside our specialty, or whether it is to ask the general public.

The PRESIDENT—Any one interested, medical or otherwise; the object of this resolution is to admit anybody as a member of the Association if he is only interested in the study of mental science; that it be no longer confined, as it has hitherto been confined, to medical men. I am informed that the name of a gentleman has been submitted to the meeting, and that he has been elected, who is not qualified as a medical man to be elected. I would ask Dr. Clouston if he knows anything about it?

Dr. CLOUSTON—I merely follow the example of what the society did last year and the year before. Last year more than one gentleman who is not a member of the medical profession was elected a member of this association, and Dr. Batty Tuke is merely carrying out the society's practice in that matter.

The PRESIDENT—I think, then, we had better decide upon the motion before us, and if we agree to it, that will settle the matter.

Dr. STEWART—This seems to me to be making a thorough organic change in the whole association, to bring in parties no matter who they may be. It strikes me, individually taking a deep interest in the Association as a professional body, that it would not be wise to make it a non-professional body. I think the Association should study the question very closely before they pass a resolution of this kind, which will make an organic change in the whole association. We shall not know who will get in amongst us.

Dr. ARLIDGE—You have the same protection against admitting improper members of the Association as you have in any other society. If you look to the sequel to the rule before us, you will find a further provision made—that any person desiring to join the Society shall be recommended by two existing members of the Association. That is a further check.

Dr. TUKE—I may explain : I seconded this resolution, but I certainly should not have done so, and the members will, perhaps, understand what I was about in the matter, being a Conservative, and, like Dr. Stewart, wishing to preserve our Institution as it is. The fourth rule says the election of members shall take place by ballot at the annual meeting, and a majority of two-thirds of those present is required at the election of each candidate. I shall most certainly black ball any candidate who comes forward not of the medical profession, unless I see good reasons to the contrary; and I think it is most likely most of the members will follow the same course. But I have no objection to seconding the broad and catholic motion of Dr. Arlidge, we having this power in reserve.

Dr. WOOD—I think we are making a mistake; we call ourselves a Medico-Psychological Association, and now we are proposing to swamp our medical position altogether, and to let in anybody, we do not know who. Really, if we wish to preserve the character of a medical association and a scientific association, we must stick to our constitution. It is all very well to say that you may black ball people who put up, but why should we invite people to be put up who are liable to be black balled? It is an ungracious thing to black ball anybody; I think we should not encourage people to come forward unless we elect them. I shall propose as an amendment that we retain our distinctive character as a Medico-Psychological Association by making it a rule that any member of the medical profession interested in the study of insanity may be admitted.

Dr. TUKE—That is the existing rule.

Dr. WOOD—Then I shall propose that the existing rule stands.

Dr. STEWART—I beg to second that amendment.

Dr. CLOUSTON—I think I ought to mention, before this question is voted on, that this resolution, proposed by Dr. Arlidge, is not a hasty one. The committee consisted of all the ex-presidents of this Association, men of the largest names and influence among us in this department. They met together, and considered the question very calmly, and took a great deal of trouble in the matter. In addition to these men there were a number of the most influential members of our Society—also members of this committee, and really the *élite* of our Society—taking the question into consideration, recommended this change. I think this view ought to weigh very strongly with some of us. The mere fact of any lay gentleman wishing to join this Association certainly implies a very great interest in our proceedings, and should not be met by a sort of rebuff on our part. We ought to be very glad that any intelligent gentleman from the outside, such as the Scotch lawyers who joined us, and others, should ask to join our Association.

Dr. WOOD—I think there would not be the slightest objection to putting in the lawyers, but let us have professional people. If it is to be a Medico-Psychological Association we must stand out for it.

Dr. CLOUSTON—It means that it may be either medical or psychological; it covers the whole ground.

Dr. MONRO—We have every opportunity for admitting eminent lawyers as honorary members. We have not quite sufficient order at our yearly meetings, but I think that if we are to admit the Lunatics' Friends Society we should increase our troubles very much.

Dr. ARLIDGE—Let me recall the meeting to the fact that this is not the first time that this great question has been debated, and those previous debates have always ended in the enlargement of the scope of the Association, and the admission of non-medical men into it. I only speak of that as a piece of the history of this Association. We have debated this at previous meetings.

The PRESIDENT—It was rejected eight years ago, when a committee was appointed to consider the rules.

Dr. ARLIDGE—I thought it was approved. I merely put this proposed alteration before you as the result of the deliberations of the committee which was appointed. I cannot personally express my opinion on the matter.

Dr. YELLOWLEES—I think we are quite agreed as to the desirability, if possible, of associating with us other professional gentlemen interested in our own subject, and if we can do it without altering materially the constitution of our society we should be glad to do it. I do not think the question of honorary members meets it. We cannot make everybody an honorary member that wants to join, and I think professional men ought to be able to join us to the extent of taking our Journal and attending our discussions. Is it not possible to introduce some kind of membership, to make them associate members, so as to keep our society as at present, and yet

give them the opportunity and ourselves the advantage of their joining us in our meetings?

The PRESIDENT—It has occurred to me whether it would not be a desirable thing almost to appoint another committee to consider the possibility of making a sort of modified membership to include men of that class, and whether that committee might not take the whole subject into their consideration. We should be very glad if we met with any suitable gentleman, really interested in the matter, to elect him; and we are all agreed that we should like to preserve the medical character of our Association.

Dr. STEWART—Most admirable provision is made by the honorary membership, and I certainly would press the amendment.

Dr. SANKEY—Can Dr. Arlidge tell us who were the members present at that committee?

Dr. ARLIDGE—All the previous Presidents, with Dr. Christie in addition.

Dr. RHYS WILLIAMS—We are now getting into a discussion, which appears to have no end if we go on paragraph by paragraph. I should propose, with all due respect to the Committee of Ex-Presidents, and the majority of whose work I suppose has been done by correspondence, that you should appoint another committee who shall take the whole matter into consideration for the future, specially with a view to bringing in other members if we can.

Mr. MOULD—I hope Dr. Wood will press his motion. I think we understand what we desire. I gladly acknowledge the great ability of the gentlemen who have framed these rules, but we do claim for ourselves to either say yes or no to their acceptance. I must confess that this is the thin edge of the wedge to introduce the lay element into the government of asylums, which we all deprecate. We can receive these men, eminent in other professions, without making them come in as specialists, and I do think the character of this Association should be even more medical than it is. I would ask Dr. Wood to press his motion that the rule should stand as it originally did, and then we shall mark our sense that we do not want any lay element in the government of asylums.

Dr. WICKHAM—May we not pass a motion that in the opinion of this meeting the membership of the Society should be enlarged, and appoint a committee to consider it.

The PRESIDENT—That was the spirit of the resolution which Dr. Rhys Williams proposed, but which has not been seconded. I must, therefore, put the amendment proposed by Dr. Wood, and seconded by Dr. Stewart, that the rule stand as it is.

The amendment was then put and carried.

Dr. ARLIDGE—Allow me to proceed with the next division of it—"That every person desirous of being admitted as an ordinary member, shall send in a written or printed request to that effect to one of the Secretaries, and that such request shall bear the signature of at least two actual members of the Association, who, from personal knowledge, shall recommend his election."

Dr. WOOD—I will second the adoption of that paragraph.

Dr. TUKE—The prosperity of our Association depends upon a succession of new members; why should we throw any technical difficulty in the way? As it now stands, any member can propose another gentleman, and he can be seconded by some other member of the Association. The medical officers of the asylums have to go through a considerable probation before they get their appointment, and I think the less difficulty thrown in the way of our assistant medical officers and others joining the Association the better.

Dr. STEWART—The proposed rule seems to me to be surplusage. It will be throwing an unnecessary difficulty in the way of members. I would move as an amendment that the present rule stand.

Dr. RHYS WILLIAMS—Supposing the superintendent of an asylum wants to propose an assistant officer, who is known to no one but himself, there would be some difficulty; how can Dr. Blank, for example, propose his assistant as a member of the Association if he has to get another member of the Association who can speak to him from personal knowledge?

The motion was then put and carried, 17 voting for and 7 against.

Dr. ARLIDGE—I propose that to Rule 8 we add the proviso—"That the number of honorary members be limited to 40, of whom 15 shall be chosen from amongst foreign psychologists." It was feared that we might unduly enlarge that list so as to make the honour no honour at all by the indiscriminating admission of honorary members. That was the view entertained by members of the committee.

We have had a little difficulty to-day arising on account of the rule having admitted members of the Association not of the profession. That will have to be taken into consideration I think presently. Dr. Stewart has been advocating that we should admit all such as honorary members, entirely setting at naught the meaning of the word "honorary." It is incumbent upon us in order to retain the Association that we should adopt some other proceeding, and I think by resolution of the meeting to-day we might agree to the formation of an order of corresponding members, or something tantamount to it, and in that order of corresponding members introduce all such gentlemen who are not eligible from not being members of the medical profession. I make these remarks with reference to the word "honorary," and as to the necessity of limiting the number of honorary members. Sometimes we have had long lists of gentlemen's names come suddenly upon us, and it is a very disagreeable thing to refuse names when they are once put before us. We may unduly encumber the list and make it no honour at all. I therefore propose the resolution.

Dr. CHRISTIE—I will second that, and I do so from the simple fact that to these resolutions are appended the names of Dr. Laycock and Dr. Arlidge, who committed the great irregularity of admitting a great number. It shows how repentant they are.

Dr. WOOD—There is some little difficulty in limiting the number of foreign honorary members to 15, seeing that we may have some very distinguished men arise, and the door would be shut against him till one of the gentlemen now in possession thinks proper to die and ; they may persist in living for the next forty years.

Dr. TUKE—We have 21 foreign honorary members at present.

Dr. CLOUSTON—I beg to move that the proviso with reference to the number of honorary members be omitted from the recommendation of the committee. I do so not because I think the subject of any importance whatever, but simply to bring the matter to the vote.

Dr. ROGERS seconded the amendment, which was agreed to.

Dr. ARLIDGE—The next recommendation is "That the President at the termination of his tenure of office become a Vice-President for life, and as such be an *ex-officio* member of the Council.

Dr. ROGERS—I will second that.

Dr. BLANDRORD—I must oppose that. I think by the time you get a Council it will be entirely unwieldly in point of size, and also the *ex-officio* members of the Council will outweigh the ordinary members. I propose that that be rejected.

Dr. TUKE—I beg to second the rejection. It is exactly contrary to the object we have been working at for the last four years.

The amendment was carried.

Dr. ARLIDGE—The next resolution is "That the following rule be adopted instead of Rule 10 :—"That the President be elected for three years"—that is the first and most important clause. The President hitherto has always been elected for a year.

Dr. WOOD—I was unfortunately unable to attend the meeting at which the resolutions were passed, and I should like to know what the reasons were.

Dr. TUKE—And who were present at the meeting ?

Dr. ARLIDGE—These resolutions were agreed to by correspondence.

Dr. TUKE—Was there any one there except the signees of the report, Dr. Laycock and Dr. Arlidge ?

Dr. ARLIDGE—I assure you these are not my own personal resolutions. A correspondence was carried on with every member on the committee ; the result of the correspondence was collated by myself, and printed, and again circulated amongst them. We did our best to get the collective wisdom of all the past presidents, and this is the result of that collective wisdom. It is for the meeting to express an opinion upon the fact as it is put before it, that the President be elected for three years. I give no reasons for its adoption ; I am merely the mouthpiece of the committee.

Dr. TUKE—I propose that the rule stand as it is, and I will give my reasons for it. We have been a Society now twenty-five years, and have increased our numbers from 20 to 300. We have elected to-day thirty members, and our present system is a good one ; it gives us each year an opportunity of getting the views of members of the Association. Our annual addresses are most valuable. To elect a president for three years will oblige him to make his annual address each year. We shall not get new annual addresses, we shall not get the same variety into our meeting. It is an innovation, and should be resisted as useless. I propose that the rule stand as it is.

Dr. DAVEY—I will second the amendment. I think it would be very serious indeed, and interfere greatly with the interests of this Association if such a rule as that were to become a law. There is nothing I can conceive more likely to injure the best prospects of the Association. It would be altogether unjust, and I hope never to see such a rule as that pass.

The amendment was then put and carried.

Dr. ARLIDGE—The next clause is "He shall preside at the annual general meeting, and at all other meetings at which he may be present, and in all cases of equality in voting shall have a casting vote. He shall also be an *ex-officio* member of all committees." It is merely putting in detail a little more what is done at present, but there may be some reasons for that.

Dr. WOOD seconded the motion, which was adopted.

Dr. ARLIDGE—The next recommendation is that the Treasurer, the Secretary for Scotland, the Secretary for Ireland, the Editor or Editors of the Journal, and one auditor, be eligible for re-election; also that the General Secretary hold office for the term of three years. The object is to get business more into order, so as to avoid the possibility of an annual change of Secretary.

Dr. WOOD seconded the motion.

Dr. TUKE—I beg again to oppose this innovation, simply for this reason: the action of the General Secretary of this Association depends so very much upon personal bearing and conduct towards members of the Association. The whole prosperity of the Association depends so very much upon the Secretary that I really think to elect a Secretary for three years is an unnecessary thing. You had much better retain in your hands the power of getting rid of your officers if you wish it.

Dr. ROGERS—I will second Dr. Tuke's amendment.

The amendment was put and agreed to.

Dr. ARLIDGE—The last clause is merely a definition of the Secretary's duties—"That the General Secretary be the agent of the Association at large, and of the Council in particular. That he refer all matters of business and all correspondence relative to the affairs of the Association to the Council or to the President, as circumstances require, or as particular rules enjoin. That he conduct all necessary correspondence, and make and preserve minutes of all meetings, as well those of the Council as those of the Members of the Assembly in general meeting. The minutes of all meetings to be read at the next like meeting, and if approved by such meeting to be signed as correct by the Chairman for the time being, with the exception that the reports of the annual meetings may be published when so signed by the President." This enlargement of definition arose from some differences of opinion which have been started at previous general meetings, and it was considered desirable by the Committee that the duties of the General Secretary should be more particularly defined.

Dr. CLOUSTON seconded the motion.

Dr. TUKE—I am very sorry to be perpetually rising in opposition to this very distinguished Committee, whose names I do not know, and object strongly to this definition of the Secretary's duties. It is impossible that the General Secretary can be the agent of the "General Association at large, and of the Council in particular." If there has been anything in my conduct to make it necessary to lay down rules for action, as to what I should do or leave undone, then I think it should be passed. If not, it is as perfectly unnecessary for me as for the other secretaries. As for my writing the minutes of the meetings it is simply impossible; I am obliged to get shorthand writers as it is, and as for reading them it would take half the time of the meeting to read the minutes of the last meeting. The thing is much better as it is now, simply to take the minutes as read.

Dr. CLOUSTON—I hope our Secretary will not take this as any personal insult or slight, because it has no personal reference. It merely refers to the general duties as Secretary, has no kind of retrospective meaning in the least, and if the Society thinks the General Secretary ought to perform those duties I do hope our General Secretary will not take it amiss if we should pass those definitions of his duties, because it has no personal reference, I am quite sure.

The PRESIDENT—The General Secretary, on consideration, might see that this merely defines what he does now, and he might properly accept it.

Dr. TUKE—No; I cannot possibly do that. I cannot accept or receive what I do not understand. I do not understand how the General Secretary is to be the agent of the Association at large and of the Council in particular. This is a purely honorary office. We are dealing with a hidden body. I really do not know who are really the gentlemen on this Committee.

Dr. CLOUSTON—I think Dr. Tuke's statement that he does not know the members of the Committee is scarcely consistent with the courtesy due to the Committee appointed by the Society. We all know that they were the past presidents of the Society, with Dr. Arlidge as Secretary. He has informed us to-day that all these resolutions were submitted to each individual member in print, so that I think Dr. Tuke is wrong in saying that we do not know who they were.

Dr. DAVEY—I would suggest that the names of these gentlemen are to be found in the report of the proceedings at York, two years ago.

Dr. RHYS WILLIAMS seconded the amendment.

Dr. WOOD—I must ask leave to correct an error into which Dr. Clouston has fallen with regard to the framing of these regulations. They are supposed to have emanated from the past presidents, and it is said that all these rules have been submitted to the different members who did not attend. I feel it right to say I was unfortunately unable to attend, and these rules were not submitted to me. Perhaps that may account for why I have really felt it my duty to object to some of them, for it would seem inconsistent that I should be concerned in the framing of these rules, and should now oppose them. They were passed at a meeting which certainly we ought to have been present at, but as a matter of fact I was not, and I did not know of them.

Dr. STEWART—I was a member of the Committee also, and I certainly never got a copy.

Dr. MONRO—I beg leave to say the same. This is the first time I have seen them.

Dr. CHRISTIE—I think it is only justice to the other members of the Committee to state that the opinions of the Committee were collected on certain vital points, and that someone—I suppose Dr. Laycock—put them into this shape. I recollect most distinctly receiving a small pamphlet, and I distinctly recollect Dr. Wood's name being in that as having expressed certain opinions, and therefore virtually, I think, that the whole Committee are bound by them; but as to these actual words Dr. Wood is quite right; we never saw them.

The PRESIDENT—Three members of the Committee have now said they have never seen these rules which have been brought forward. All this seems to prove the wisdom of what I suggested at the beginning, that you should appoint a Committee for another year to go over the matter, and really to embody those changes in a definite form, and put them on the agenda either for a special meeting or the next annual meeting, and so let us consider them properly.

Dr. ARLIDGE—Dr. Tuke has tried to set abroad the notion that I have been the sole author of these rules; but that, I assure you, is not by any means the case. When the Committee was appointed certain things were put before different members; they were asked to decide upon the question of amalgamation, and also upon the alteration of the rules. In answer to the circulars addressed to the members I received letters from all the members of the Committee.

Dr. TUKE—I have been Secretary for about eleven years, and Dr. Lockhart Robertson for about ten. We were never consulted as to the alteration in the rules as to the Secretary. Surely if anybody could have given any information as to the duties of Secretary we were the men to do it.

Dr. ARLIDGE—We endeavoured to collect from every member of the committee their opinions as to the amalgamation, and as to the necessary alterations in the rules. Those members who thought well, gave us their opinions, and others gave none at all; but a considerable number gave their opinions as to the nature of the alterations required in the Association. Those opinions were collated by those who met personally together, and the result of the collation and deliberation was these rules.

Dr. MONRO—It really is a very important thing that I should set myself right with the meeting as regards the point whether I have seen these recommendations or not. I certainly remember being asked a question about the amalgamation of our Association with the Royal Society of Medicine, but I do not remember—of course if Dr. Arlidge says he sent me this, I can only say that I fully admit it, and it is a forgetfulness on my part; but I have not any remembrance of these subjects having been put before me. Certainly on seeing them here I do not agree with many of them. The only subject which I remember having been distinctly put before me was whether our Association should become a branch of the Royal Society of Medicine or not. But of course, if it is said that these things were sent to me, I fully accept that they were sent to me, and I have forgotten them.

Dr. ROGERS—As there seems to be a good deal of misunderstanding about whom

this Committee were, I will move as an amendment that a fresh Committee be appointed to consider the remainder of the general rules for the conduct of this Association, such Committee to report at the next general meeting of the Association.

Dr. RHYS WILLIAMS—I will second that.

Dr. WOOD—This is the last recommendation, as a rule, which we have before us; we may just as well dispose of it. Then come the supplementary rules; there seems to be a fair break there.

The PRESIDENT—Dr. Rogers accepts the suggestion you make, and I will now put to the meeting the amendment on this proposition with regard to the defining the duties of the General Secretary. The amendment is, that the rule should remain as it is.

The amendment was adopted by a majority of eleven to nine.

Dr. ARLIDGE—Then comes a rule as to the number of members of the Committee. It is merely putting in words what has been agreed to at previous meetings.

Dr. CHRISTIE—I do not think it was in the original rule that he was not to be re-eligible for three years. I think the original resolution was that he was not to be eligible for one year.

Dr. WOOD proposed that the rule remain as it is.

Dr. ROGERS seconded the amendment, which was agreed to.

On the motion of Dr. WOOD, seconded by Dr. MONRO, the consideration of the supplemental rules was deferred till next year.

Dr. YELLOWLEES—We have to-day elected lay members into the Association. What is to be their footing? Where are they? Anywhere, or not at all? It is a most awkward position in which to place them.

The PRESIDENT—We have decided that they are not really members.

Dr. YELLOWLEES—Then I shall ask to give notice of this motion:—"That professional gentlemen, interested in the objects of the Association, may be admitted as associate members; their election shall take place in the same manner as for ordinary members, but they shall take no part in the business of the Association."

The Society then adjourned.

AFTERNOON MEETING.

The PRESIDENT read his address on *Insanity and its Treatment*. (See Part I. *Original Articles*.)

Dr. BUCKNILL—I beg to propose a vote of thanks to our President for the very thoughtful and eloquent address which he has delivered to us.

Dr. TWEEDIE—I second it.

The resolution was carried unanimously.

Dr. BUCKNILL—I shall be very happy to start the ball. I believe I am nothing if not critical; and, therefore, I shall proceed to criticise your very able and learned address, sir. Of course, I must take it in its parts. On the first part, namely, hereditary tendency to insanity and the way to deal with it, I wish to ask whether it has occurred to you that hereditary insanity really is not a persistent form of insanity—whether it does greatly contribute to that increase of insanity which some persons affirm to be taking place at the present time, and which others deny, or whether, in fact, hereditary insanity is not a form of insanity which does not very readily die out. Without troubling ourselves with impossible matters, such for instance, as a railway to the moon, or parliamentary interference with the marriage of persons who may be subject to peculiar diseases, I wish to ask you whether your attention has been directed to those very interesting speculations, and more than speculations, of M. Morel, in his "*Traité de Dégénérescence Humaines*," which to my mind prove that insanity is a disease which rapidly exhausts itself in sterility, and in the cessation of the stock. We well know that nothing is more common than to be able to trace insanity to the grandparents, and in the cases of atavism, to which you have referred, it seems to take a jump from the grandparents over the intermediate generation to the insane grandchildren; but how often do you meet with cases of insanity descending through four generations? I must own that I cannot at present remember to have met with such a case throughout the whole extent of my own experience. The fact is, that when persons become insane they, or their descendants, are prevented by the laws of the land, or by the laws of society, from marrying. Some few of them marry and beget children, but a greater number of them are placed in sequestration either in asylums or socially. If they do beget children, those children are very liable to be idiots, or more insane than their parents; and so with the third or fourth generation the stock ceases to exist. It is, therefore, my

opinion that the hereditary diathesis of insanity does not tend to increase the number of insane persons in the community. However, this is a moot question, which I merely throw out for consideration. With regard to your proposition that there is a certain diathesis which runs through the children of the insane, but which may not produce insanity, I think nothing is more true, nothing is more consonant with experience, but it is one of the most difficult and interesting scientific questions connected with our specialty as to what this insane diathesis is—what this inheritance of a peculiar nervous temperament which produces insanity in one child, epilepsy in another, wildness and unmanageable misconduct in another, idiocy in another, hysteria in another. What is this mysterious diathesis? If you could only get at that, we might get at some rational notions as to how the children of the insane should best be educated and trained, or best be taught how to resist their tendencies. I remember reading a very little book in the series of books called "Little Books on Large Subjects," called the "Power of the Individual over himself to prevent Insanity," and the more I live and observe the insane, the more certain I am that a great number of individuals have an enormous power over themselves in this respect if they can only be taught to exert it. With regard to your second subject, I have only to observe that I do not agree with you in thinking that lunatics can be cured out of asylums so well as in them. I do think that for most cases of insanity the order, the method, the power, the whole of the means which can be brought to bear upon curative efforts in asylums, are most valuable; and, I should say, that if a person were afflicted with acute and recent mania, he would have, on the average, a much greater chance of being cured in an asylum than if he were placed under the most scientific treatment out of one. I fully admit, however, that patients may be kept in asylums too long, and that it is not necessary to keep them there until they are actually and perfectly recovered. I think it is just possible that if those persons to whom you referred as having recovered in Cheadle, had not been in the asylum at first, but had been under private treatment, they would not have recovered. Everybody admits that there are a great many patients in asylums who ought not to be there, and a great many patients out of asylums who ought to be there, and that the power of selecting what patients shall be in, and what shall be out of the asylum, is too much left to the very uncertain freaks, whims, and interests of their relations. Some persons do not choose to be troubled in any way, or give themselves the slightest care about an insane relative, but put him into an asylum and leave him there, and are very glad to lose sight of him as much as possible. On the other hand, there are many relatives who take a different view of their duties; they cannot be persuaded to place the most urgent cases in those institutions. I do think that a great evil would be avoided if it were possible to bring some scientific authority to bear upon the choice of patients, as to who should be placed in asylums, or removed from them, or allowed to remain out of them.

Dr. DAVEY—Mr. President, I will venture to make two or three remarks upon your very admirable paper. There is one thing to which I take objection to start with. You have implied that the operation of the natural laws, in so far as they affect man or mankind, is a subject for future inquiry. Now, I have very much pleasure in referring you and every gentleman here present to the writings of a great man, who has gone into that subject fully and completely, and most satisfactorily. I allude to the late George Combe, who has written an admirable work full of the subject to which reference has been made by you. You all know, or many of you, no doubt, that the title of that work is "The Constitution of Man in Relation to External Objects." Now, the book named was written thirty or forty years ago. Moreover, I will tell you of another eminent writer, who has treated the same subject fully and completely—the late Dr. Spurzheim, one of the greatest authorities in regard to the operation of natural laws on man; and second only, perhaps, to George Combe himself. The inference to be drawn from the remarks made is simply what has been drawn before, *i. e.*, that the law of progression is ever dominant in man, and is dominant only because there is a relationship between the external laws and him, their obedience being necessary to that progression. In reference to the relative merits of asylum treatment and out-door treatment of the insane, he would be a bold man who would undertake to decide off hand in reference to any individual case. There are cases which will be best treated in asylums; there are others which will be best treated out of asylums. The difficulty will even be, as Dr. Bucknill has said, to deal with the merits of individual cases. I apprehend there are those present who have heard, as I have heard, that the largest number of cures of patients suffering from insanity among the higher classes, occurs in private asylums. It has been said that the

Commissioners in Lunacy have somewhere made that assertion. I have never seen it, but if it has been made, the fact is immensely important, and I am quite sure that Dr. Maudsley will give it his attention. I wish to say a word with reference to a remark Dr. Maudsley made about mere alienists. I entirely object to the mere alienist. My friends and neighbours in the neighbourhood of Bristol call me a mad doctor, and if I respond, they say, "Why, you keep an asylum." Very true, but that does not constitute me a mere alienist. I have studied and practised more or less in all departments of my profession throughout my life, and I trust I ever shall. I do hope that we who practice in this specialty will ever bear in mind that we ought not to acknowledge ourselves as mere alienists. We should be poor doctors if we were mere alienists, and this is plainly seen when you consider the dependence of the brain upon other organs, the relationship of the brain to the liver, to the heart, to the uterus, to the ovaries. Why surely no man will undertake to treat cases of insanity who does not know pathology and anatomy in so far as those matters relate to the human frame in its entirety. With regard to the use and abuse of sedatives, no fact is more impressed upon my mind than that of the abuse of opiates and of chloral. Nothing is more certain than that these drugs are sometimes resorted to when they ought of all things to be avoided. Is it not in the experience of all here present that with some patients the very best sedative is a powerful purgative? The necessity of elimination—using the word as our President has used it—should be ever uppermost in our minds. I am continually treating cases with which I can do nothing if I did not act on this principle. Dr. Monro, I am glad to observe, has noticed in his book on insanity that the *primæ viæ* are almost invariably out of order in some shape or other. How can you remove this derangement of function if you put away the use of purgatives? They may be used moderately, sometimes less moderately, but always judiciously. Then they will in very many cases be found to be the very best sedatives. And how often, too, does it occur to you all, as it does occur to me, to give tonics with strychnine? That preparation of sulphate of iron, quinine, and strychnine, I find sometimes the best sedative in the world. The strychnine effects a constriction or contraction of the cerebral vessels, a state of things which occurs in natural sleep, and thus you will be making the very best step forward to afford your patient sleep. Who does not know also that air and exercise are of the first importance in the treatment of insanity—where there is much excitement. Put your patient into a garden or let him take a walk, or if he is in a county asylum, put a spade into his hand, and let him work. Every case, as I have said before, must rest on its own merits; but I do not unconditionally condemn the use of opium. I have in my mind at this moment a case of melancholia which resisted every form of treatment, but was at length cured by the free use of opium. She got perfectly cured, care being taken to regulate the diet and to maintain the *primæ viæ* in the normal state.

Dr. ARLIDGE—I should like to call Dr. Maudsley's attention to that peculiar book written by Moreau, and entitled *Psychologie Morbide*, in which he endeavoured to prove the connection of almost all the great geniuses in the world with some hereditary insanity, either direct or indirect. That bears out very largely what you said, that we owe an immense deal to these insane intellects in the world. Then, on the second head, the treatment of the insane in private houses and asylums, you have, I think, very rightly made a statement that the tendency to transmit or transport patients to asylums is too great in this country. The first idea of medical advisers is to take away patients immediately and locate them in asylums. I think this is carried on to a mischievous extent, oftentimes to the detriment of the patient and the prevention of his recovery. I also agree in the desirability of getting a better recognition of the advantage of private treatment by private persons who have the conveniences around them for treating cases. I believe in puerperal insanity we should certainly get much more beneficial and satisfactory results, because we could bring to bear what I consider you want so much in asylums, that is, individual treatment and the exercise of a sound mind directed upon the unsound without so much mechanism and arrangement as you must have when you come in an organised asylum. Then the question whether a patient should go to an asylum or be treated at home really resolves itself into the question of the surroundings of the individual. Now, what have we to arrange for in asylums? You arrange first of all for getting a class of people about the insane who know what they are and how to deal with them, that is, you get a class of judicious and experienced persons who have overcome those popular prejudices against the insane which we find prevalent among the public. Then again you look for appliances for guarding

against injuries and accidents. You gain means of diverting the minds of the patients, and encouraging them in other matters; you endeavour in all ways you can to teach them self-control. These conditions which you have in asylums you may possibly have in private houses; you may have judicious relatives; the house itself may be very well suited for the care of the case; you may get good attendants, and have all these appliances which you have in asylums; and therefore there must be many cases in which home treatment is preferable to asylum treatment, provided you have those conditions. In such a case the patient has many advantages over those which are found in large asylums, which I have always considered to be great evils, especially the over-grown asylums we have in this country, where I believe insanity becomes confirmed, and there are asylum-made cases of insanity.

Dr. THURNAM—There are two points upon which I should like to make a few remarks. The first is with reference to the question of the marriage of persons predisposed to or actually suffering from insanity. It strikes me that Dr. Bucknill did not quite meet your views, or quite take the view which you entertained. It appeared to me that you did not contemplate moving for any parliamentary interference in the matter, but you were considering rather the advice given by the physician to parties in those circumstances; and I must say that I think your observations are fully justified by the facts of the case. The great thing is, that parties about to enter into such relations should be thoroughly aware of all the facts. I imagine that when two persons are disposed to marry, though one or both may be predisposed to insanity, the advice even of the most eminent of our class would not prevent them forming those relations; but the question is whether, from a medical point of view, such persons should be altogether discountenanced from entering into marriage, or whether they should not in certain cases be recommended to form those relations. I imagine that every case must stand upon its own merits, and that you could not lay down any rule which would be applicable to all. Then as regards the home treatment of the insane, it appears to me that that treatment must be reserved for the highest and the wealthiest. It is out of the question to contemplate it for any others. What we want is, to have the patients placed under the care of those who are capable of controlling them. Now it is a well-known fact that relatives are, as a rule, disqualified; that parents, and brothers, and sisters are not qualified for the care of the insane. That being the case, I imagine the majority in the middle-class, and certainly the great majority in the poorer class, will find their home in the asylums.

Dr. ROGERS—I could have wished that you had gone a little further into the matter of accommodation for the pauper insane in private houses, instead of almost limiting your remarks to that for the higher classes, where of course provision can be made for them. With us, whose duties are entirely confined to the pauper classes, the difficulty is extreme. No doubt all recognise the truth of what you have said about there being a great number of so-called asylum-made lunatics. In very large asylums there are no doubt a great number of patients who would be much better elsewhere, but what are you to do with them? We should at once descend, I think, from that sort of transcendentalism that seems to guide people who, with facile pens, dash off sheet after sheet in our reviews, condemning all who differ from them. A paragraph which appeared in one article the other day appears to me not only to be absurd and untruthful, but almost libellous. It alludes to a vast number of patients being kept in asylums for the profit of those who keep them. Now anyone in Middlesex or Lancashire who is aware of the immense number of paupers over and above what the asylums can contain, will see at once how absurd that statement was, as will also anyone who has felt the difficulty I have experienced in getting rid of these asylum-made lunatics. But how are you to do it? The question resolves itself into one of expense. A man with a damaged brain cannot go about his ordinary work, especially in these days of trades unions, when everybody must be paid alike, and when the only thing the master can do in self-defence is to reject everybody who cannot do the day's work; but setting that aside, a man with a damaged brain cannot do a day's work. A man with damaged lungs may go on in many trades, but with a damaged brain he cannot. If he is suspected of being insane he is taunted by his fellow-workmen, and looked down upon with suspicion as if he were a convict. Then what resource have you but to send him to the union workhouse? And I think you will agree that the man will not be as well cared for in the imbecile wards of a workhouse as in an asylum; it is at best but a *pis aller*. Then again the question of expense crops up. I recollect reading some remarks of Dr. Parigot, who made enquiries as

to the cost at which our pauper lunatics could be boarded out. He found that it could be done at 15s. a-head ; if he had said £1 a head it would have been more easily done ; but who is to pay the 15s. ? Have you any right to call upon the ratepayers—men, perhaps, who have been a little more prudent than others, although belonging to this very class whom our President so sarcastically criticised as those who spend their week days in making money and their Sundays in going to Sunday schools. These are the men who have to pay for others who throw aside those sordid conditions of life and live after the manner of the butterflies, and who, when they break down, come upon the pettifogging tradesmen to support them. I say you have no right to call upon people to maintain them when, after all, it is only a problematical gain that they would get from the higher rate over that which they get in the asylum. As for obtaining anything like a system corresponding to that of Gheel, where people are not only willing but anxious to take in patients, at least in the manufacturing districts, I say it is impossible. To do that you must first of all make it the person's interest. Self-interest is after all the strongest moral law ; it is one that rules every one, the camp, the field, and the cottage alike, and until you can make it the interest of people to take in pauper lunatics to board, you will never get them to do it. I have lately tried once or twice with some of my neighbouring people. Our rate of maintenance is 9s. 4d. per week, but one man went all round and not one of them would take him in for 10s. a-week, and he came back crying to the asylum, and there he is at the present time. Some people think it is the right thing now to condemn us because we do not find accommodation for these people, but I think they should step down from their high pedestal and show us how it is to be done. You will find only too many people willing to follow the lead if the way is shown to them. Then with regard to escapes. You bring them forward to show how people recover when out of asylums. No doubt the experiences of all here could multiply instances of patients escaping and afterwards getting perfectly well, or at all events learning a sufficient amount of self-control to keep their delusions to themselves. Numerous instances are in my own mind of patients escaping from Rainhill, and some of them with delusions and hallucinations which have remained, but they have learnt to keep them in check for fear of being sent back again. A case occurred to me a little while ago. A man had escaped during the time of my predecessor, but his brother was admitted, and he came over to see him, and was just as mad then as at the time of his escape. Though that would be brought forward as a cure, it was merely the case of a man having wit enough to conceal his delusions. It is very well known that change, no matter of what sort, is followed by a good effect ; if you remove a patient from one asylum to another, that change is, for the most part, for a time, followed by decided benefit. I was also very glad to hear your remarks on the subject of doing without treatment altogether. I think the majority of acute cases will do quite as well without medicinal treatment as with it, and I think it is quite as much the function of a physician to determine when a patient does not require physic as it is to try how much he can actually take without producing loss of life or health. In the article to which I alluded before, everybody who does not believe in the absolute necessity of physic for patients is not to be considered in the light of a physician at all ; it is only those who make that the be-all and end-all of their existence that are to be considered physicians. All those who take a broader view of the subject, insuring by large and airy wards sufficient cubic space, so that the patients shall not jostle one another, and attending to their amusements and endeavouring to please them, are to be swept on one side as lesser lights. I wish some of those who are so fond of writing would remember the lines of a very witty writer, the countryman of our guest here :—

“ But first I would remark, that it is not a proper plan,
For any scientific gent to ‘whale’ his fellow man ;
And, if a member don’t agree with his peculiar whim,
To lay for that same member for to ‘put a head’ on him.”

If they were only to act in the spirit of those lines I think we should get more work done, and less ill-feeling engendered.

Dr. CLOUSTON.—I am sure we all agree as to the interest and the importance of Dr. Maudsley's address, and I think we none the less agree that his address has been one of utter and entire scepticism. He treated three subjects ; the prevention of insanity, the sending patients to asylums, and the treatment by sedatives ; and he answered them—Insanity cannot be prevented until we arrive at some future state

of human existence in which we shall all live in the light of right reason; patients get much better out of asylums than in them; and do not give sedatives, or you will probably poison your patients. Now, probably Dr. Maudsley framed his address with the object of exciting discussion. I think that we may fairly take that view of his address. In the first place, with regard to the prevention of insanity, I think the scope of his remarks was to this effect—that until we get human beings to live by the law of right reason, to live understanding human nature, and conforming their conduct thereto, we shall not get them to live in such a way that they shall prevent insanity in themselves and their descendants. Now I should like to hear some strict follower of John Wesley attempting to meet Dr. Maudsley's argument, and saying to him, "Well, now, what would you do with a lot of rough colliers, living in a rude part of the country, with no kind of mental or spiritual enlightenment, and those men going downwards, becoming degenerated in every possible way? Would you go to them and say, now we must educate you; we must take two or three generations to do it; we must teach you to understand human nature, and live by the law of right and reason, and then your descendants will probably be human beings in a normal state, and you yourselves will live happier and better lives?" I think I can understand the follower of John Wesley saying, "No, we appeal to facts; we go to this man and say, 'It is your duty to escape from eternal damnation, and you must love Christ who died for you;' and applying those two great motives of fear and love we have succeeded in one generation in making those men, not brutes as they were, but human beings; perhaps not living quite up to the law of sweetness and light, but living right lives, and their descendants certainly less apt to be insane or morbid." Dr. Maudsley has stated one set of facts, the follower of Wesley would state another set of facts; and I take it that Wesley's follower appeals to a stronger set of facts, a set of facts that are totally undeniable, by ignoring which we convert ourselves into worse than specialists—into people who look at only one side of the question. We must take not only the advancement in intellectual knowledge, but the spiritual side of the question clearly into account, and recognise that as a fact. Even as psychologists we have no right to blink our eyes to those facts that have taken place in our population. I am bound to say that the great improvements that have taken place among the lower classes have been in consequence of those arguments, and not through educational means. Educational means do a great deal, but the other does it much more quickly and very much more efficiently. With regard to the treatment of the insane in private houses, it so happens that I have just visited the now celebrated Scotch colony of Kennoway with one of the Visitors in Lunacy, and after that I accompanied him for a fortnight on his ordinary visitation in private dwellings, so that I could see how they were actually treated, and I must say that my views have undergone considerable modifications from having seen those cases. I think that the Scotch Lunacy Commissioners have gone to work in a very judicious and proper manner, and have produced a very great amelioration, and that the result of the experiment is to a large extent a success. I do not mean to say that the class of cases that are in Kennoway and private houses is the class that we have in asylums; that is a fact that cannot be denied; the great majority never were in asylums and never would be likely to be in asylums, but they are insane, imbecile, out of their mind, and because they are not affected as the asylum people are, why are they not to be looked after? The Scotch Commissioners by their system of looking after them for 6s. a week, or in some cases less, have put those people in a very comfortable position indeed. That is less, I believe, than any asylum in the kingdom can keep patients for, and you avoid altogether the expense of building the lunatic asylum, and you avoid placing persons in an artificial state of existence. Then as regards their happiness, I was quite convinced that the majority were happier than in asylums; but I do not think, and the Scotch Commissioners are very far from thinking so, that the system is applicable to recent and acute cases. It is only applicable to imbeciles from their birth, or chronic cases. The only question, however, that we have to discuss is the line of demarcation—where should the asylum lunatic end and the lunatic in a private house begin? That would be a far more profitable question for us to think about and investigate, than on the one side to abuse asylum treatment and on the other side to abuse private house treatment. Let us try to find out the stage of insanity at which it is right they should be treated in private houses. In regard to the third head of Dr. Maudsley's discourse, the use of sedatives in insanity, I think that most men who have gone largely into the subject have come to this conclusion, that insanity and brain excitement are

precisely equivalent to neuralgic pain. I think no physician outside scruples for one moment to subdue a severe attack of tic in a patient. The patient might lose in weight, or be rather the worse for it, but it is so very desirable to get rid of the state of pain, that he subdues the pain even at the risk of hurting the patient. What we want to subdue neuralgic pain is some sedative or neurotic medicine which will subdue the pain without interfering with the normal nutrition of the nervous system, and that is the desideratum in regard to the use of sedatives. What we ought to look at, it seems to me, is this in giving sedatives—do they hurt patients? Do they send them on the road to death? If they do not, and at the same time quiet excitement, I think we are quite entitled to assume that they do good. If we find that a patient is going down hill, then the patient's life is the first thing, and we must not sacrifice that or do anything which interferes with his health. But if we do not do that, then we may subdue excitement by any sort of sedative that is proper to the case. That seems to me about the problem we have to solve. I have been very much struck, indeed, with the extreme divergence of opinion among able men who have used different kinds of sedatives for the same class of cases, and who have used them apparently conscientiously, but who have come to totally opposite conclusions with regard to their effects. I have heard a gentleman say, "Chloral is of no use; I have almost given up its use. It seemed to me eminently dangerous; if I have not killed two or three of my patients with it, I have very nearly done so, and it is extremely dangerous to use." Now, I must say we ought to study our own human nature first. How is it that some of us, after giving chloral for some time, day and night, and with some degree of care, have the highest possible opinion of chloral as a great sedative, a sleep producer, and place our trust in it most confidently, while other men, having tried the same drug on the same class of cases, say it is no good? I confess it is a more wonderful problem than even insanity itself. I think that possibly the process of education and living according to right reason, if it was applied to each one of us in youth, so that we could educate our minds in a scientific spirit, and be able to draw right conclusions from the facts coming under our notice, would probably do far more good than most of our discussions hitherto, for it is marvellous to me how different men could come to such utterly different conclusions.

Dr. WOOD—The fact is, any physician connected with an asylum is to a certain extent tabooed. A mad physician is a dangerous character, and if we find in our own class men who are occupying high positions, saying anything to encourage the popular notion that we are unworthy of the trust that is reposed in us, I think we ought to try and set ourselves right. I do not believe for a moment that that was the intent of the observation made by the President in his excellent address, but I am very much afraid that the tendency of philosophy as a science is not the tendency which we want. I think it has a great tendency to overlook facts, and to state theories, and to forget how to apply them in practice. There are many arguments to be used in support of the particular views that our President has enunciated; but I think everybody will feel that each individual case of insanity must be dealt with strictly on its own merits. We cannot lay down specific laws to guide us in the treatment we are to pursue with regard to any particular class of patients. There are no two human beings alike, and I attach small importance to the inference drawn from the fact that our President has made experiments on three what he calls parallel cases of puerperal insanity. Now, we know pretty well the general characteristics of puerperal insanity, but we also know that it varies in its nature as much as the nature of the individual does, and nothing can vary more. To pretend, therefore, to lay down any rules founded upon these three cases seems to me a delusion. I can quite understand that one patient may do well on one treatment, and another, whose case seems exactly like it, may do well with exactly the opposite treatment. Our experience points to the conclusion that very opposite results are sometimes produced from the same means, while the very opposite means produce the same results. As regards the first important question—as to the propriety of insane persons, or persons with an insane diathesis, marrying—I think there again we can lay down no specific rule; we must be guided by the circumstances of the case. I suppose any advice that we could give to people about to marry, unless it is the advice that "Punch" gave, "Don't"—and that, perhaps, would not be attended to—would not go for much. The probabilities are that when people come to that point and ask their medical advisers whether they may do a thing, they have already made up their minds to do it, and right or wrong, they will do it. I think the only way to deal with it is to point out to people that there are some objections.

I do not think it is a part of our duty to lay down the law as to what will occur and what will not occur. We can only remind them that there is a danger, and then we absolve ourselves from our responsibility. With regard to the treatment of patients in public or in private institutions or at home, that is a delicate question for one occupying my present position to meddle with; because, of course, the interested motives which are supposed to be the chief rule of all our actions—and we cannot shut our eyes to the fact that they are very powerful—must influence us to a certain extent at least; but my experience is this—that when I see patients at their own homes, I see them surrounded by persons utterly incompetent to be about them: either they are exceedingly anxious, or they are indifferent and for those very reasons, if for no other, the patients should be got away from their own homes. Of course there are exceptions, but I believe, as a rule, patients are better away from their own family and own homes. In their own homes they consider they are entitled to do as they like; in the house of another person they do practically come to submit to what they find to be the law of the house, and so we save an immense deal of excitement and irritation. I think it must have occurred to everybody who has had to deal with insane persons in their own homes, that the great majority of these cases are necessarily subjected to very irksome restrictions: they are under the domination, to a great extent, of servants; their medical adviser will, as a rule, suggest to their friends to keep out of the way as much as possible, and they are left shut up in a room with one or two or more attendants. Now I can imagine no system less likely to produce recovery, or more likely to produce irritation, and keep the patient in a state of excitement. The reasons, however, which lead us to advise that the patient should be taken away from home, do not necessarily lead us to advise that they should be put into asylums; but it is important that the public should not be encouraged in the notion that there are grave objections to patients going to an asylum. Now, if we regard the cure of patients as above all things the first consideration, I think we must encourage the friends to put on one side as much as they can their feelings in the matter, and consider the patients only. If they consider what they regard as their own interests as against the interests of their family, then we can understand that they prefer to keep the patients out of an asylum, because there is a certain odium attached to it. But why does that odium attach, and is it well that we should say anything here which could sanction that view of the case? Surely there are sufficient precautions now to prevent any person being taken to, or kept in an asylum who ought not to be there. As a matter of opinion, we might feel that many patients ought to be out of them if they had any suitable and satisfactory home to which to be sent; but that is not the case. Many patients who do well in an asylum do not do well elsewhere, and least of all at home. From my own experience, I believe first, that a patient is better away from home, and next, that in a large proportion of cases it is best he should be in an asylum. I believe it is better for them to be in an asylum than in a private house with servants to guide them, because within certain prescribed limits they may have absolute freedom. That is the great advantage of an asylum. They have to submit to certain rules; I believe that is a wholesome discipline: they are relieved from all the little anxieties and annoyances of home, which are trying to all, and peculiarly so to them. As soon as you place them in an asylum, as a rule, the irritation and excitement does subside, and I think there is no pretence for saying that patients are made insane in an asylum. Of course there are many patients that might be out, but, as Dr. Bucknill says, there are a great many who might be in who are out. But what I think most important to guard against is saying anything to the public which would lead to the conviction that there is something about the management or the atmosphere of an asylum that is prejudicial. Believing as I do that asylums form the great means of arresting and restoring insane persons, I think it is a very serious mistake to make for us to encourage such a notion that there is something very horrible about an asylum. Our object should be rather to encourage people to believe that an asylum is a home with nothing that a patient or his friends need dread. I do not pretend to argue that therefore all patients should go to asylums. I think there are many who should not: but I think the great majority should. One word as to the treatment. I think it is hardly necessary to say much. We all feel that excesses of all kinds are to be avoided; but the scepticism of the philosopher comes in here also and tells us to do nothing, that the most potent means we possess are so dangerous that we must not touch them. On that

principle we should never have a candle or a fire: they are both dangerous, and if we have not judgment to know when to put out the fire or the candle, of course, we must submit to the inconveniences of doing without both; but it cannot be denied that the immense value of these potent agents is such that it would be a sin to encourage the medical practitioners to believe they must never resort to such means. I believe they are of the most valuable and important kind; and the views that we are in danger of having propagated by authority from this society are such as I am sorry to hear. Our friend, Dr. Maudsley, writes most ably, but we must be a little on our guard against his philosophical views.

The PRESIDENT—Dr. Wood has been under some misapprehension in supposing I was arguing for the treatment of the insane in their own homes. That did not enter into my mind. I was thinking of private treatment away from their own homes and families, and in order to render that more practicable I suggested that licenses should be given to people to receive two or three patients, as the case might be.

Dr. MONRO—When I came here I did not intend to speak on this subject, because I feel that being so very much concerned in private practice it might arise in the minds of some that I had a prejudiced view of the matter; but still the subject is so interesting, and some of the observations that have been made are so pregnant with matter that I cannot help addressing you. I am exceedingly sorry that I was not here to hear Dr. Maudsley's address; but everything I have heard since I came into the room has convinced me that it was equal to his usual power. I believe I do not agree with Dr. Maudsley on some of the subjects to which he has alluded, therefore perhaps I may be allowed to criticise them on the present occasion. His discourse appears to have divided itself into three heads—the prevention of insanity—the treatment of insanity in asylums or in private houses—and the use of narcotics,—three most deeply interesting subjects for which we ought to have meeting after meeting, thoroughly to discuss and analyze them. I will say a few words on the subject which evidently is the most interesting one—the use of asylums or the contrary in the treatment of insanity. I believe the great mistake is to lay down a general rule of any sort as regards whether asylums should be resorted to or not. The insane divide themselves into two great classes, easily and well known, rich and poor. For the rich every means of treatment is open; for the poor I believe that asylums are absolutely requisite. That observation has been made by one or two gentlemen before. I know Dr. Maudsley has explained himself, and says he does not propose home treatment as the alternative to an asylum; but hitherto the conversation has gone on the idea of home treatment, and I say that for a man in acute raving insanity, or for a profound melancholic, a poor man's house is too often destruction to the patient himself, and destruction to his family. I do not think there can be a question about that, and as I have not so much to do with the poor—that is, I have no connection with the county asylums, though I have of course to do with the poor of a certain class at my hospital, St. Luke's—I may be supposed to give an unprejudiced opinion on the subject. But the insane divide themselves, besides, into various forms of insanity, and for some forms asylums appear to me to be almost absolutely requisite, while for others it is questionable whether private treatment is not preferable. I think that the system of always saying that a patient must go to an asylum, and must be removed from his friends, is almost as bad as the opposite extreme; in fact, either extreme is bad. We must judge about each case according to its individual merits. For acute insanity, and cases which are constantly requiring feeding—and according to my experience it seems as if abstention from food gets more and more common—it appears to me that an asylum is absolutely required. You cannot treat a case fairly unless you have all the appliances and means of feeding, and plenty of attendants about to help. You cannot do that sort of thing satisfactorily in a private house. Of course if you have a large house and lots of servants you may do almost anything, but I am talking of the houses of the ordinary run of gentlemen and ladies. Therefore I say that for the acute insane asylums are almost absolutely requisite. Again, I think asylums are most important for imbeciles, not only for their own treatment and comfort, but most especially for the good and advantage of the rest of the family. What can be more dreadful than to have perhaps one sister out of four an imbecile patient in a house? It is a cruelty to the others. I feel that if we could only secure first-class asylums—I am not speaking of asylums where high sums are paid, but asylums where high moral and religious thoughts are frequent, so excellently alluded to by my friend just now (Dr. Clouston)—if we could think only

of the patients' interests and not of private interest—we should do a great deal of good, and I believe that for the acute insane and for imbeciles such asylums would be the best things we could have. Then we come to the great class of melancholics or monomaniacs. I think that there is constantly a great deal of anxious consideration about these cases as to whether you should send them to asylums or not. I can quite understand what Dr. Maudsley has evidently alluded to, but I do not think that there are often such things as asylum-made lunatics. I can quite understand that asylums have had the effect in some cases of doing more harm than good. Now I want to say one word upon another reason why an asylum is so important. I believe that insanity is continually mixed up with perverseness of temperament, and that insane people, especially certain classes of them, are very like what we call naughty children, in a great part of their mental state. I do not say it is not something more than that, but that this is a great part of their ailment; and we all know you cannot treat a naughty boy at home, though he may get right if he goes to school. I constantly see that same effect upon an insane person on coming to an asylum. I have seen patients come in, and almost the next day they have been well. "A cheap cure," you will say, because I have not given them any medicine; but I believe it is only the effect of finding themselves under control. They see they cannot have their own way, they see they must give it up, and they have a certain power of giving it up. Now as to treatment in private houses. Dr. Maudsley, I suppose, alludes to medical men receiving single patients. In such cases I really do feel that unless they are most excellent men the patients are liable to be neglected. The medical man is too often out all day in his carriage, and the patient is really left to himself. Another source of harm is this, that all the energies of the master of the house, so far as he does pay attention to the patient, are concentrated upon that one poor individual, and he really gets oppressed by the amount of treatment. Whereas there is a certain escape in an asylum, there are a great many objects to destroy the monotony of life, and distract the attention of the patient from his delusions. I am very much afraid, however, of being thought a simple advocate of asylum practice. I am not that. I feel most keenly the anxieties of the subject, and that in many cases residence with a medical man is the best method of treatment. I believe it would be a most important thing if we could combine what I have called the sense of restraint and the sense of a necessity of the patient's controlling himself with some of the affections of home life. And now I am not speaking of a thing which I have not practised myself, for the last year or two I have been in the habit of receiving sisters and brothers, and mothers, sane people, as boarders into my asylum. At the present moment I have three or four such at my asylum, and I wish to impress upon this most important Association, the great advantage which I have seen to arise from that mode of practice. I believe that those doctors who say "Remove all the friends, they can only do harm," often talk nonsense, and mislead the public—not intentionally—but they do so. On the other hand, I do believe that the genuine clear advantages of an asylum are things which we must not for a moment throw away. I would urge upon gentlemen connected with the practice, amongst the higher classes especially, to think of what I have said regarding having individual members of the family, servants of the family, governesses, and people of that sort, as boarders in their institutions. I fully grant that at first there is a difficulty in the subject. In the first place, it a little upsets all the management of the asylum, to have a number of eyes all around you, looking out for the very slightest offence—sane eyes; but I believe that this is one of the great advantages of having sane boarders in the asylum. It keeps all the servants, all the officers, everybody, up to the mark, in a most wonderful way. To sum up what I have said, I believe asylums to be absolutely requisite, especially for the poor, and for certain forms of insanity. Now about the question of sedatives. I do not know exactly what Dr. Maudsley said, but I feel strongly against sedatives. I fully grant what Dr. Wood has said, that we must not take up any general rule, and refuse sedatives altogether, but what we want to allay chiefly is excitement; and certainly I have seen opium and morphia too often increase the excitement instead of allaying it. As to chloral, I think it has a wonderful effect where it succeeds. It makes a patient sleep for four hours, but does not do much more. I think the best treatment is plenty of air and exercise, plenty of food, and a certain good amount of stimulants. Now, I must say one word about the other subject, the prevention of insanity. I wish very much I had heard what Dr. Maudsley said. Dr. Bucknill, whom we all of us feel so much pleased to see amongst us, was saying, just shortly after I came into the room, that he thought there was a mystery about

hereditary insanity, and that we have to find out something extraordinary to account for it. I do not understand that. We do not see anything mysterious in hereditary consumption. Why should not a man have a weak brain as well as have a weak lung, and receive it through his ancestors—a brain which is equal to the wear and tear of life up to a certain point, but breaks down just beyond that?

Dr. BUCKNILL—I think Dr. Monro must have misunderstood. I did not say anything of the sort.

Dr. CHRISTIE—With reference to what Dr. Wood said—because the public are apt to blow upon us, therefore we ought not to discuss this subject, it strikes me that is the very reason why we should discuss it, and show that we are not afraid to meet it. I am a strong advocate for early treatment in asylums. I have seen the evil of placing patients under home influence, and leaving them to the charge of some nurse or attendant, so that when you visit them, you have no history of what is going on, beyond what this man tells you; whereas, in the asylum, you know whether your instructions have been carried out or not; and for my part I should certainly recommend early treatment in asylums. Your recommendation about home treatment for two or three cases is simply recommending small asylums instead of large ones, and I suppose there will be no difference of opinion, that a small asylum is better than a large one for the treatment of many cases, because observations can be more effective. With regard to the tutoring of our children, that they may understand the laws of nature better, and with regard to what Dr. Clouston said with reference to Wesleyanism, I may state that when I went into Yorkshire, I was rather foolish perhaps, to take up that subject, for I brought the whole of Wesleyanism down upon me. I simply said that they went to the excess of religious zeal, and they brought fact after fact upon me to show the amount of good they had done, and their facts will go a great deal further than our theories. There is no doubt they have done a great deal among the lower classes to prevent many causes of insanity, and, after all, I suppose, that is the right way to begin. As regards the use and abuse of sedatives, I think with Dr. Clouston, that if we can allay the excitement without injury to any very great extent to the health, we do much more good than by leaving the excitement to wear itself out. I recollect one case of puerperal insanity, where I pushed morphia to a great extent, and the more I gave the more the excitement took place; so I gave it up, and she recovered. On the other hand, I can produce other cases where I did not take to that treatment, but adopted feeding, and the consequence was I had to go back to morphia. Therefore we cannot from just one or two cases establish a general rule. It needs a long course of treatment to decide such a matter. No one can accuse me now of interested motives, for I have no asylum to send cases to, and I have no object in cracking up the county asylum; but I do say this, that I am quite sure that if cases were taken earlier to county asylums, as a rule, there would be a larger number of cures.

Dr. YELLOWLEES—With regard to the first part of your paper, I confess I do not believe that philosophy without something very much higher will do a great deal to ameliorate either the individual or the race. The point in reference to that prevention, which occurs to me, is whether we could not, as a profession, do something in the matter of the present miserable mode of training children. We have all seen how poor children are over-driven, resulting in insanity or epilepsy, and that has struck me especially in the case of children who have come from other climates, and been suddenly plunged into the rush of our civilization here. It has struck me forcibly in one or two cases. I think the second question resolves itself into one of circumstances in the great majority of cases. If you could eliminate circumstances and make it a medical question, which unhappily you can very rarely do, then I think we should all pretty much agree about the kind of cases we should send to asylums. I think there are some cases that will do very much better with personal, individual, constant care out of asylums, and that it would be positively an evil to send such to asylums; still I agree with the general principle that if a case needs asylum treatment the sooner it is sent there the better. The very worst cases of course must go to asylums. I do not think that there is any help for it. The imbeciles ought to go for the sake of their education and their friends; the perverse cases almost always must go; but there is a certain class of melancholics also that are benefited by the tone and atmosphere of the asylum, and by being saved the trouble of thinking. A poor man I know of, wrote to his friends some time ago saying that he had nothing to think about, for a bell always told him what he had to do.

The PRESIDENT—Did he get well?

Dr. YELLOWLEES—He got well. I want to say a word about the use and abuse of sedatives. I have been particularly pleased with the doctrines that have been promulgated here to-day, for they happen to be very much in consonance with my own convictions. I believe that we have committed throughout a mistake in assuming, for it is a pure assumption, that first of all we ought to allay excitement. I want to know how that is proved to us. Are we quite certain that excitement is a bad thing? May it not be the best thing possible for a man to boil over for a little? As a general rule I refrain from giving sedatives in most cases. In some I begin at once, and I have no doubt about their being valuable; but in the majority of cases I refrain, and I am quite sure I have seen them do harm. There is another question besides going down hill towards death: I think going down hill to a prolonged dementia is a much more frequent result of sedatives. I have often seen that I have gone on too long with sedatives, and said, "I wish to goodness I had not done that." But you cannot tabulate that experience, and unless someone sees it at the same moment as you do, you cannot make anything more of it than a bit of personal observation. I have often been struck with what Dr. Clouston said about the amazing diversity in the reports as to the actual results of sedatives, and in none has the diversity been more amazing than about chloral. You can only fall back upon your own personal experience, and refuse to believe anybody else. It is the greatest possible misfortune that we cannot tabulate those results, or watch them together. On the other hand, I do not think it is possible for the scheme which was proposed of observing parallel cases in different asylums to be carried out. I do not believe in parallel cases, either as to insanity or as to any other disease. You treat the individual, not the disease. I think, however, it is just possible that Dr. Rogers goes to the other extreme. I should be very sorry to pooh pooh sedatives altogether; I believe sometimes they are extremely valuable, but I am coming to this—that I give less and less sedatives, and pay more and more attention to the liver, the *primæ viæ*, the heart, the lungs, the uterus, and regard that as far more important towards the recovery of the patient than the mere repressing of excitement. I feel that there is no more science in clutching a man's brain-cells by sedatives than in tying his hands. Chemical restraint is just as bad as physical restraint. It is quite true, sometimes you must quell the excitement, and you give him some sedative to make him sleep, otherwise he would kill himself; but we have not yet proved that excitement *per se* is a bad thing, and I think in some cases the best thing is to let the excitement boil over. I constantly have cases discharged recovered that have not had a single grain of sedative.

The PRESIDENT—At this late hour I shall not attempt to follow the different speakers in the remarks which they have made; it would be a long and difficult task to do so; I can only say that I am much better satisfied with my paper now than when I read it. I was very ill satisfied with it as a paper, but I am exceedingly well satisfied with the result of the discussion. It has answered its special object entirely in bringing forward a mass of valuable experience, though it has given rise to no little divergence of opinion on matters of great practical importance. I think Dr. Clouston accurately described my paper as one of scepticism, but, in accepting this description of it, I would use the word not in an ill sense as Dr. Clouston might do. I would remind him that scepticism was a very good word before it got an ill meaning; that fundamentally scepticism, and episcopacy, and bishop have the same root; that they all come from the Greek word *σκοπεω*, which means to examine or look to. Now scepticism is really nothing more than doubt, and doubt leads to enquiry, and enquiry leads to understanding, and sometimes the best service in the world that you can render a man who is going, complacently satisfied, down hill with a conviction in his mind, is to arrest him, and say "My dear friend, are you sure you are quite right in your belief? Be so kind as to explain the grounds of your belief." If I have accomplished this purpose I shall have answered the purpose I had particularly in view in making the address.

A vote of thanks was passed unanimously to the President and Fellows of the Royal College of Physicians for the use of the College.

In the evening the members and their friends dined together at Willis's Rooms; Dr. Bucknill and Dr. Lockhart Robertson (the Lord Chancellor's Visitors in Lunacy), and Dr. Wilkins (Lunacy Commissioner for California, U.S.), were present as guests of the Association.

Increase of Pauper Lunacy.

If the statistics of Pauper Lunacy bore any regular relation to the actual amount of that evil as it has existed since the establishment of our present systems of administration, we would be obliged to admit certain inferences of a very surprising nature. For instance, the table in which the English Commissioners exhibit the proportion of lunatics to population, shows such a yearly increasing proportion that if the statistics of the last twelve years are to be regarded as normal, and we are to suppose that such a yearly increasing proportion has been going on during the past century, we arrive in less than 100 years at a time when lunacy must have been a very rare disease indeed. If we also make allowance for the much more rapid decrease in the proportion of pauper lunatics than of private lunatics, as we look back from year to year we find that near the beginning of the 100 years all the insane must have been found in that class of society which now supplies what we call our private patients. This result alone is sufficient to demonstrate the falsity of the basis on which it is made. No such increase of pauper lunacy as is shown in the table can be really taking place, nor can it be entirely accounted for by the omission previously of a class of cases which ought to have been included among pauper lunatics. Either or both of these causes would account only for a very appreciably decreasing increase, and we are almost driven to the conclusion that our system tends to include among our so-called pauper lunatics many persons who ought either to have been never included, or who have ceased to belong properly to that category. The members of our Association ought to be the most intelligent guides of the public in such matters, and it is desirable that we should continually revert to the question until the right solution is discovered. The following article, taken from the *Scotsman* of 1st September, shows the aspect in which the matter is viewed by the general public, and the kind of evil in which a want of wise direction may involve our administration:—

The cry is still, they come. In the year 1859, the population of England was 19,686,701, of which number 36,762 were certified to be lunatics or idiots. In the year 1871, the population was 22,704,108, of which number 56,755 were certified to be lunatics or idiots. Of this 56,755, 6,110 were private patients, 50,185 were pauper patients, and 460 criminal patients. Thus in 1871 there were 13,423 pauper patients above the number of patients of every description

in 1859. In the year 1870 alone there was an increase of 2,042 in the number of the insane, of which increase 1,860 were pauper patients, and of these 1,615 were placed in establishments, and 245 left in private dwellings. Now, supposing the maintenance of each pauper patient to be overhead only £20 per annum, we have thus in one year under this one head an addition of £37,200 to the charitable expenditure of England; while for the accommodation of those placed in establishments, at the moderate rate of £50 per head, £80,750 must have been expended. Time was when hopes were entertained that the annual reports of the Commissioners in Lunacy would at last announce that an equilibrium had been established between the demand for admission into asylums and the amount of accommodation which these establishments afforded. But all such hopes may now be dismissed as visionary; for, build as we may, in every succeeding year we find the same demand for further accommodation, without the slightest dawn of a change, and the Commissioners in Lunacy, booted and spurred, urging on the unhappy Justices to meet this demand by additional building. It is easy to sit in Council at Whitehall, and in the desire to temper the wind to the shorn lamb, to shout "build, build," and to point out to the Justices what the statutes require at their hands; but we confess we have some sympathy with the hesitation of the Justices to go on with a work which shows as little promise of coming to an end as that of filling a bottomless pitcher. Do the Commissioners ever pause to inquire whither they are driving, or what precise object they have in view? They will probably tell us it is their duty, cost what it may, to provide for the proper care and treatment of the insane. But we will then ask them whether it is really necessary, in order to attain this end, to gather all the insane together in expensive buildings specially erected for the purpose. Judging from their proceedings, we suppose they will answer yes, and point to the cases of "lunatics under illegal charge" referred to in their reports in support of their views; but, Heaven help us! how many sane people are there in this single city of Edinburgh in far worse plight than any one of their most neglected cases? And, on the other hand, how many patients annually come to mortal grief in asylums either through culpable neglect or through brutal violence! By one-sided arguments it is easy, according to one's bias, either to uphold or to condemn asylums; but we would rather see the question of their utility considered upon broad and general grounds.

Insanity is not a new disease. It was known to the ancients, and treated by Hippocrates. There is, however, some reason to think that it has become much more common in modern times; and if we were to judge from the rapid extension of the asylum system, we would be obliged to admit that it is only within the present century that it has taken on its present startling growth. But we can institute no reliable comparison between the prevalence of lunacy in times anterior to the erection of asylums and its prevalence at present, for the simple reason that in the former period we had no standard wherewith to gauge its

dimensions. It may be that, by the pernicious habits of modern life, by overcrowding in cities, by over-indulgence in whisky, beer, and tobacco, by overwork of mind and body, and, by neglect of proper exercise and recreation, the nervous system of the population has been so damaged that insanity has been greatly increased; but, if this be so, it is very clear, from the statistics furnished by the Commissioners in Lunacy, that we have not got hold of the proper remedy. Instead of finding that the great outlay which has been incurred in erecting asylums has led to the decrease of insanity, we find, on the contrary, an enormous and continuous development. Say what we like, there is no getting past this fact, and it is time that it were looked steadily in the face.

If a man were to open an hospital for the treatment of the diseases of the eyes, and to continue to maintain all the patients whose sight was impaired, after all hope of benefit was gone, it is easy to see that he would have to go on adding ward upon ward to his hospital, to meet the demand for the accommodation of new applicants. It would be very amiable of him to say that he could not send forth the blind to pine in misery and want; but, at the same time, it would be cheap benevolence to maintain them at the expense of the ratepayers. Still, the accumulating numbers of the blind would be no proof that diseases of the eye were increasing; neither would their accumulation be evidence of the necessity for their permanent detention. One thing only would be clear, that a heavy burden was thrown upon the community; and the question whether this burden was really necessary would still remain to be answered. Nobody becomes blind from his own choice, neither does any one become insane from a like motive. Nevertheless, it may be as much an abuse of the charitable resources of the nation to maintain gratuitously all those who are insane, as to provide for all those who are blind. So long as there is any chance of sight or reason being restored, no one would grudge extending to the sufferers every possible advantage; but when sight and reason are irrevocably gone, what end is to be served by detaining them in expensively built and expensively conducted establishments? The reply will probably be—To ensure their comfort and happiness, and, in the case of the insane, to guard also against danger. It is certainly a fact that many superintendents of asylums hold themselves to be in some measure responsible for the proper care and also for the proper behaviour of insane patients after their discharge. So far as regards the private insane, this view of a superintendent's duties has very little influence in the disposal of the patients, for their friends are generally guided by the considerations of expense and convenience as to whether they will remove them or leave them. In the cases of pauper patients, however, the pecuniary argument carries but little weight, for the payments fall on the broad back of the parish; and, as a rule, the argument of convenience is also in favour of leaving the patient in an asylum. From such causes it happens that the accumulation of

patients in asylums is almost entirely confined to paupers. Making allowance for the growth of the population, the number of the insane in asylums maintained from private means is not greater now than it was twenty years ago. But experience shows that there is no difference in the nature of the malady, dependent on the fact of the patients being private or pauper. The only difference lies in their pecuniary or social position. It is not therefore more unsafe in itself to discharge a pauper than a private patient; and accordingly, if means could be discovered for supplying an adequate motive for the removal of pauper patients, we should at once solve the difficulty of placing the extent of our asylums and the demand for admission into them in equilibrium, without having constantly to fall back on additional building. The only practicable way apparently in which this could be done would be by an appeal to the self-interest of the parties concerned. With this view we would suggest, in the first place, that the parishes which are responsible for the maintenance of the patients in asylums, should give it to be understood that they are ready to make more liberal allowances for those who may be removed to private dwellings; and, in the second place, that the asylum rate of maintenance should be increased by annual augmentations, from a low figure in the first year (so as not to discourage application for admission in the early stages of the malady), up to one which would ultimately make it a matter of real moment to the parish to undertake removal wherever this is practicable. By inducements of this kind the relatives of patients would, on the one hand, be disposed to undertake their care; while, on the other, the parochial authorities would be brought to see that their interest would lie in having recourse to early treatment, while the malady was still curable.

It is not unlikely that cases would occasionally be removed from the asylum which it would be necessary to send back. But beyond the trouble this would involve, no great harm would be likely to ensue. The whole country is divided into parishes or unions, each with its complement of overseers and medical officers; and were some such machinery introduced into the English lunacy system as exists in Scotland in the shape of the Deputy Commissioners, the public would have an adequate guarantee through their periodical visitation against neglect or abuse. At any rate, it seems established that under the existing *régime* we cannot trust to superintendents of asylums, or to inspectors or overseers of the poor for the removal of unrecovered pauper lunatics in sufficient numbers to make asylums meet the wants of the population without constant extension. But there are strong symptoms, and they will become stronger with every passing year, that this system of constant building is exhausting the patience of the ratepayers. A change in our lunacy system is imminent, and it will be better that it should be guided with the skill and caution which emanate from experience, than that it should be allowed to assume the destructive form of the typhoon.

The Honorary Secretary has received the following letters from Professor Christison and Dr. Mitchell :—

“ Edinburgh,
“ Aug. 11, 1871.

“ MY DEAR SIR,
“ My share of work in the cause of the British Association Meeting has been such as to compel me to sink my profession, and abandon correspondence for a week past. But for that I should have acknowledged at once your kind intimation, that the Medico-Psychological Association have done me the honour of electing me one of the Honorary Members of the body. For this mark of their favour I beg you will offer the Association my sincere thanks. I wish that in return for the compliment I could offer them something in proof that I deserve it.

“ I am,
“ Yours most faithfully,
“ R. CHRISTISON.

“ Dr. Harrington Tuke,
“ Secr. Med. Psych. Assocn.”

“ 5, East Claremont St.,
“ Edinburgh, 7th Aug., 1871.

“ MY DEAR SIR,
“ I shall be obliged by your conveying to the Members of the Medico-Psychological Association my best thanks for the honour they have conferred on me in electing me an Honorary Member of the Association.

“ I am,
“ My dear Sir,
“ Your obedient servant,
“ ARTHUR MITCHELL.

“ Dr. Harrington Tuke.”

Books, Pamphlets, &c., received for Review, 1871.

1. A Treatise on Diseases of the Nervous System. By William A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine in the Bellevue Hospital Medical College, &c. New York : Appleton and Co. 1871. (*Will be reviewed in our next number.*)
2. The Medical Jurisprudence of Insanity. By J. H. Balfour Browne, Esq., of the Middle Temple, Barrister-at-law. London : J. and A. Churchill. 1871. (*See Part II. Reviews.*)
3. The West Riding Lunatic Asylum Medical Reports. Edited by J. Crichton Browne, M.D., F.R.S.E. London : J. and A. Churchill. 1871. (*Will be reviewed in our next number.*)
4. St. George's Hospital Reports. Edited by John W. Ogle, M.D. ; and Timothy Holmes, F.R.C.S. London : J. and A. Churchill. 1871.
5. American Religion. By John Weiss. Boston : Roberts Brothers. 1871.
6. Verslag over den Staat der Gestichten voor Kranksinnigen in de Jaren 1864, 1865, 1866, 1867, en 1868 ; aan den Minister van Binnenlandsche Zaken ingediend door de Inspecteurs dier Gestichten. 1871.

7. The Twenty-fifth Report of the Commissioners in Lunacy to the Lord Chancellor. Ordered by the House of Commons to be printed 13th July, 1871. (*See Part II. Reviews.*)
8. Thirteenth Annual Report of the General Board of Commissioners in Lunacy for Scotland. Edinburgh: T. and A. Constable. 1871. (*See Part II. Reviews.*)
9. The Twentieth Report of the District, Criminal and Private Lunatic Asylums in Ireland; with Appendices. Dublin. 1871.
(*As usual, this Report came too late to hand to enable us to review it in connection with the Reports for England and Scotland.*)
10. Die Kantsche Erkenntnisslehre widerlegt vom Standpunkt der Empirie. Ein vorbereitender Beitrag zur Begründung einer physiologischen Naturauffassung. Von Edmund Montgomery. München: Ackermann. 1871. (*Will be noticed in our next number.*)
11. Behind the Bars. Boston: Lee and Shepard. 1871.
(*This book contains a vivid record of the sad experience of a person who was confined for some time behind the bars in an American asylum for the insane. We hope to give some further account of it in our next number.*)
12. A New View of Causation. By Thomas Squire Barrett. London: Prevost and Co. 1871.
13. The Origin of Matter and its Mental Government, revealing the *ne plus ultra* of cause: a Mechanico-Mathematical System of Nature. By Richard Laming, M.R.C.S. H. and C. Treacher: Brighton. 1871.
14. Le Démon Alcool: ses effets désastreux sur le Moral, sur l'Intelligence et sur le Physique. Par Prosper Despine, M.D. T. Savy: Paris. 1871.
15. Die Agoraphobie, eine Neuropathische Erscheinung. Von Prof. C. Westphal.
(*A reprint from the Archiv für Psychiatrie.*)
16. On the General Management of Public Lunatic Asylums in England and Wales. By John Hawkes, M.D. J. and A. Churchill. 1871.

Appointments.

BURMAN, J. WILKIE, M.D., Edin., late Clinical Clerk, West Riding Lunatic Asylum, Wakefield, and Assistant Medical Officer, Devon County Lunatic Asylum, Exminster, has been appointed Assistant Medical Officer to the West Riding Lunatic Asylum, Wakefield, *vice* Thompson, promoted to the Medical Superintendency of the Bristol Borough Lunatic Asylum.

HOYSTED, Dr. J., has been appointed Resident Assistant Medical Officer to the Littlemore Pauper Lunatic Asylum, near Oxford, *vice* J. M. Skelton, M.B., resigned.

CEELY, R. W., M.R.C.S.E., has been appointed Assistant Medical Officer to the Devonshire Lunatic Asylum, Exminster, *vice* J. W. Burman, M.D., L.R.C.S. Ed., resigned, and appointed to the West Riding of Yorkshire Lunatic Asylum.

DOVE, W. W., L.R.C.P. Ed., late Clinical Assistant to the West Riding of Yorkshire Lunatic Asylum, has been appointed Assistant Medical Officer to the Somersetshire Lunatic Asylum, Wells, *vice* F. D. Power, M.R.C.S.E., resigned.

GIBSON, C. H., L.R.C.P. Ed., L.R.C.S. Ed., M.R.C.S.E., has been appointed Assistant Medical Officer for the Idiot Branch of the Warwick County Lunatic Asylum.

GRAY, A. R., M.D., M.R.C.S.E., has been appointed Assistant Medical Officer at the Broadmoor Criminal Lunatic Asylum.

MAGOR, H. C., M.B., C.M., has been appointed Clinical Assistant at the West Riding of Yorkshire Lunatic Asylum, Wakefield, *vice* W. W. Dove, L.R.C.P., M.R.C.S.E., appointed Assistant Medical Officer to the Somersetshire Lunatic Asylum, Wells.

MERCER, N. G., M.D., has been appointed Medical Superintendent of the East Riding of Yorkshire Lunatic Asylum, Beverley.

KING, T. RADFORD, M.D. Edin., late Assistant Physician, Royal Edinburgh Asylum, has been appointed Assistant Physician to the Cheshire County Asylum, Parkside, near Macclesfield.

A CORRECTION.—Dr. Wickham, the Medical Superintendent of the Borough Lunatic Asylum, Newcastle-upon-Tyne, has requested us to correct an error in the Obituary notice of the late Dr. H. G. Stewart, which appeared in the number of the Journal of January last. A statement therein made was erroneously said to be on the authority of "his successor at the Newcastle Asylum;" it should have been on the authority "of his successor at Dumfries."

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The Journal of Mental Science.

Original Papers, Correspondence, &c., to be sent by book-post direct to Dr. MAUDSLEY, 9, Hanover Square, W.

English books for review, pamphlets, exchange journals, &c., to be sent either by book-post to Dr. Maudsley, or to the care of the publishers of the Journal, Messrs. J. and A. Churchill, New Burlington Street. French, German, and American publications may be forwarded to Dr. Maudsley, by foreign book-post, or to Messrs. Williams and Norgate, Henrietta Street, Covent Garden, to the care of their German, French, and American agents:—Mr. Hartmann, Leipzig; M. Borrari, 9, Rue de St. Pères, Paris; Messrs. Westermann and Co., Broadway, New York.

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The copies of *The Journal of Mental Science* are regularly sent by *Book-post (pre-paid)* to the ordinary Members of the Association, and to our Home and Foreign Correspondents, and the Editor will be glad to be informed of any irregularity in their receipt or overcharge in the Postage.

The following *EXCHANGE JOURNALS* have been received since our last publication:—

Annales Médico-Psychologiques; Zeitschrift für Psychiatrie; Vierteljahrschrift für Psychiatrie in ihren Beziehungen zur Morphologie und Pathologie des Central Nervensystems, der physiologischen Psychologie, Statistik und gerichtlichen Medicin, herausgegeben von Professor Dr. Max Leidesdorf und Docent Dr. Theodor Meynert; Psychiatrisches Centralblatt herausgegeben von Vereinen für Psychiatrie und forensische Psychologie in Wien, Redigirt von H. Beer, M. Leidesdorf und Th. Meynert; Archiv für Psychiatrie und Nervenkrankheiten, herausgegeben von Dr. L. Meyer und Dr. C. Westphal; Correspondenz Blatt der deutschen Gesellschaft für Psychiatrie; Irren Freund; Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali; Annali Frenopatici Italiani Giornale del R. Manicomio di Aversa e Della Società Frenopatica Italiana Diretti dal dott. Cav. B. G. Miraglia; Medizinische Jahrbücher (Zeitschrift der K. K. Gesellschaft der Aerzte in Wien); Rivista di Discipline Carcerarie in relazione con l'Antropologia, col Diritto Penale, &c., diretta Da Martino Baltram Scalia; the American Journal of Insanity; the Quarterly Journal of Psychological Medicine, and Medical Jurisprudence, edited by William A. Hammond, M.D. (New York); the British and Foreign Medico-Chirurgical Review; the Dublin Quarterly Journal; The Lancet; Medical Times and Gazette; The Practitioner, a monthly Journal of Therapeutics, edited by F. E. Anstie, M.D.; the Medical and Surgical Reporter, a weekly Journal, by S. W. Butler, M.D.; the Medical Times of Philadelphia. Also the Morningside Mirror; the York Star; Excelsior, or the Murray Royal Institution Literary Gazette.

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PART 1.—ORIGINAL ARTICLES.

On the Hereditary Connections between Certain Nervous Diseases.
By FRANCIS E. ANSTIE, M.D., F.R.C.P.*

It is a great pleasure to me to have the opportunity of speaking to a number of my professional brethren on the subject announced for to-night's lecture—a subject whose vastness and far-reaching connections with the problems, not only of practical medicine, but also of physical and mental education for the young, are daily presented to my mind with increasing force by the facts that I observe in hospital and private practice. The inheritance of the neurotic temperament, with its ever shifting modifications and transformations of outward form, I need hardly tell you is not exactly a new discovery. Commenced, as far as scientific research goes, by Morel, in his treatise, "*Des Dégénérescences Humaines*," the investigation of the hereditary neurosis has been since carried out by many observers, and has been specially illustrated by one of the most eminent alienists of the present day, Dr. Maudsley. It has now been sufficiently demonstrated in a general way, that there is handed down, in certain families, a tendency of the individual members to inherit from their parents either a particular nervous disease—for instance, insanity—from which they suffered, or else—and this quite as frequently—some other disease of the nervous system. Thus it often happens in these neurotic families, that an insane progenitor will endow a variable number of his descendants respectively with epilepsy, with neuralgia, with insanity, with invincible tendencies to drink, with brain softening, or with chorea; the more fortunate of his descendants escaping with only some more or less strongly marked irritability of nervous

* The substance of this paper was delivered as an address at a *Conversazione* of medical men of the West Riding, at the West Riding Asylum, Wakefield.

system, which may express itself chiefly in mental sensitiveness and impulsiveness, or in the existence of some slight local spasmodic affection, or in a general eccentricity of character which it is impossible to define. Or it may be that the vicious circle of nervous degeneration began at an earlier stage; for instance, the insane progenitor was himself the child of a drunkard, whose habitual intemperance had been the starting point—as there is reason to believe it often is the starting point—of a lowered nervous organisation of the family stock, which will show itself in the various ways already mentioned. These general facts are doubtless familiar to your minds, and you are also well aware that this sad inheritance is a curse that seems to fall with special weight upon families, many of whose members are of a mental calibre that would fit them to be the salt of the earth, possessing quickness of insight, original cast of thought, genius for mechanical invention, or, it may be, delicate artistic faculties. These are the men that really make the world march; it is they who give society its impulses to progress of all kinds; but, unhappily, it must be also said that they are too frequently the victims of their inherited temperament, and that their lives, even when they are not interrupted by any positive catastrophe, are too often overshadowed by the gloom of hypochondriasis, or poisoned by some unhappy intellectual or moral weakness, which may be known only to themselves, but is to themselves a perpetual misery, perhaps even a perpetual terror. Of course I am not here referring to the possessors of the highest kind of genius, that rare excellence which flowers only once or twice in a century of a nation's history; such natures are calm and strong, the typical embodiment of the *mens sana in corpore sano*, at its highest and best. Your Shakespeare or your Goethe is no weakling. But, unhappily, it is not such as these that bear the heat and burden of modern progress, and among the men of second rank, upon whom that burden actually falls, a lamentable number are the victims of that inherited defect of nervous balance which is at the foundation of those associated hereditary neuroses, respecting which I ask permission to say a few words to you. And if we further reflect on the fact that for one such partial, even if brilliant and useful success, as nature achieves in the persons of these neurotic men and women of talent, she probably makes at least two failures in the shape of their relatives who are nervous, but *not* talented, we cannot avoid the conviction that the subject of inherited neurosis is one of the

most important that engages the attention either of the physician or of the student of social science.

It is now nearly fourteen years since my attention was first actively directed to the study of nervous diseases, and during that time I have preserved, with a greater amount of care than I have been able to give to the records of any other class of medical facts, such particulars as could be obtained from apparently trustworthy sources as to the personal and the family history of nervous patients coming under my care in dispensary, hospital out-patient, and private practice. In fact, I had been engaged for some considerable time in this investigation before I read the treatises of Morel and Moreau of Tours, and before Dr. Maudsley's book was published, although these works greatly enlarged my view of the importance of the subject. But although I have thus had both the inclination and, in some measure, the opportunity to work out these questions with reference to actual patients, it has happened, as is probably the case with almost every inquirer, that experience has come to me in a very unequal fashion, allowing me to collect a greatly larger mass of information respecting certain kinds of nervous diseases than respecting others. For example, with regard to alcoholism, epilepsy, neuralgia of all kinds (including angina pectoris), and spasmodic asthma, my historic data are on a pretty large scale; with respect to insanity they are not inconsiderable, but with regard to other forms of nervous disease they are by no means so extensive.

It is not my intention to detain you with vague general remarks on this great subject of inherited neurosis; I rather prefer, on practical grounds, to confine my attention to one special aspect of the matter. The point which I wish to bring before you is this: I believe that the inherited neurosis may be manifested in two varieties, or degrees if you will; one of which is sufficiently familiar and easy of recognition, while the other, on the contrary, is scarcely acknowledged to exist, and is particularly liable to be ignored under circumstances when it is of the highest importance (if my view be correct) that no such error should be made. I shall call the first variety (for this occasion at least) the Active Hereditary Neurosis, and the second variety I shall call the Dormant Hereditary Neurosis.

1. The manifestations of the Active Hereditary Neurosis are so remarkable and so patent, in many instances, that the only wonder is that they should have remained without any-

thing like scientific classification until quite recent times. You all remember the standard example, doubtless a somewhat extreme one, which Morel gives in his work, of extreme intemperance in a great-grandfather leading to a series of severe neurotic catastrophes in successive generations of his descendants, ending with sterile idiocy of the great-grandchildren and extinction of the race. It is of course impossible to know whether the intemperate progenitor was not himself descended from a stock already strongly tainted with neurotic imperfection; but it is evident, from Morel's account, that his habits at least prodigiously accelerated the degeneration of his race. And I am inclined to believe, from my own observation, that alcohol, of all depressing agencies, has the most decided power to impress the nervous centres of a progenitor with a neurotic type, which will necessarily be transmitted, under varied forms and with increasing fatality, to his descendants. I suspect, and for reasons which are none the less weighty to me that it is impossible for me to publish them in detail, that there are many families now suffering from, and many more that have been decimated or even extinguished by, fatally progressive neuroses that had their origin simply in the reckless habits of port wine drinking that were in fashion for at least three generations after our statesmen practically excluded the light wines of France from the English market. It is the old story—that "the fathers have eaten sour grapes and the children's teeth are set on edge." Here is one case, which I select from a list that I have published in my work on Neuralgia. The patient was a gentleman, aged 54, who applied to me on account of severe neuralgia of the third division of the fifth nerve. He was himself a great drinker, and drinking had been hereditary in his family for several generations. His grandfather had become epileptic; his father died insane; a sister was consumptive; and two brothers very eccentric. I considered that the family was likely to be extinguished in the next generation, so completely had the type become degraded, so incompetent did the race appear to produce even a single individual whose nervous centres came up to an average standard of organization. In another case referred to in my series I had reason to suspect that drink had been a main original cause of the degradation of the family stock, on the paternal side, in a previous generation; but here the catastrophe was probably much hastened by the fact that both the parents were neurotic. The actual patient was a

man who for many years suffered repeated attacks of frontal and nasal neuralgia, complicated, and sometimes alternating, with erysipelas of the painful region. He was naturally of an amiable disposition, and possessed refined tastes; but towards middle life his whole *morale* broke down, he took to drink and outrageous profligacy, and died in a state of acute insanity. This man's father committed suicide; his mother was a sufferer from epileptiform neuralgia; one of his children died in convulsions, and another has been choreic.

No doubt, however, the degrading influence of alcohol upon the nervous centres rarely stands alone; there is very frequently simultaneous indulgence in other exhausting vices, and still more often there is at least the negative evil that the drinker ceases to cultivate the higher intellectual and emotional faculties, which, accordingly, dwindle in comparison with the merely appetitive nature.

There is some doubt in my mind whether the Active Hereditary Neurosis is ever *originated* in a family stock except by one of four causes. The first is drink, of which we have spoken. The second is extreme sexual excess; but it may well be doubted if that, unaided, is capable of implanting the stamp of progressive degeneration on a race, except, indeed, in the case of masturbation, and even that tends to personal sterility rather than the begetting of neurotic children. The third is habitual and long-continued insufficiency of food—a most potent cause undoubtedly. The fourth, which unhappily is often added to the third, is total vacancy of mind from the want of education: a Wiltshire or Dorsetshire farm labourer, on 8s. a-week, offers a painfully vivid illustration of these conditions. Any one of these causes, with the doubtful exception of the second, however, is probably capable, at anyrate in a generation or two, of fatally perverting the organization of the nervous system, and evoking the Active Hereditary Neurosis.

The extent to which the Active Hereditary Neurosis prevails among all classes may be somewhat appreciated by reference to my fourteen years' statistics of neuralgia, always premising that that part of the information which was derived from ill-educated persons must be taken with abatement; though I can safely say that all possible care was taken to exclude doubtful-sounding statements. Of 83 hospital and private patients, I obtained evidence of the existence among blood-relations of the following diseases:—Epilepsy, 14 cases; hemiplegia, or paraplegia, in nine cases; insanity, 12 cases;

drunken habits, 14 cases; consumption, 18 cases; "St. Vitus's dance," four cases. It was a remarkable thing that that common and, as many people think, trivial complaint, migraine, was exceedingly often found in family relation with very serious neuroses, and in particular had a very marked hereditary relationship to epilepsy. I am gratified to see that my original statement to this effect, in "*Reynolds' System of Medicine*," vol. ii., is expressly confirmed by Dr. Eulenburg in his recent treatise on *Functional Nervous Diseases*.

As an example of the extraordinary and really terrific way in which the inherited temperament will sometimes break out in an individual who seems to have been perfectly free from nervous disease, but who belongs to a family in whom the neurotic disposition is Active, and affects many persons—take the following case. It is that of a young lady who might have been selected as a type of healthy beauty, but who belonged to a family in which neuralgia and other evidences of the neurotic disposition were uncommonly prevalent. This girl met with an accident, in which she suffered compound dislocation of the ankle; the limb was beautifully set, and it was just the case in which one would expect that the restorative powers of healthy youth would ensure recovery. Unhappily tetanus set in, a very few days after the accident; and, moreover, it was tetanus of that fatally continuous and severe type which no remedies ever seem to influence in the least degree. It killed her in about sixty hours; and, for my part, I was entirely convinced that the occurrence of tetanus at all, and much more its occurrence in this severe form, must be altogether referred to the neurotic elements existing from birth in this young lady's system.

This last case seems to form an appropriate bridge, as it were, by which we may pass over to the consideration of the Hereditary Neurosis in its distinctly Dormant variety. Under this heading I refer to cases as to which the hypothesis is,—that the neurotic disposition has at one time been active in the race,—that favourable circumstances (especially intermarriage with healthier stocks) has mitigated it, and practically reduced its action to a nullity—the members of the family now exhibiting no evident tendency to nervous diseases—but that, nevertheless, a concealed bias to such diseases does still exist, and is capable of being called out, in any individual of the race, by certain unfortunate influences or conjunctions of influences. I grant that the proof of the existence of this variety of Hereditary Neurosis is less easy

than is the proof of that of the Active type ; but the following considerations seem to afford very powerful arguments in its favour. In the first place, as to the probabilities from analogy, I think there can be little doubt. Every step that we take in the improvement of Biological Science seems to bring us nearer to an unreserved acknowledgment of the imperishable nature of the marks left by ancestors upon their descendants. They may be concealed, but they are *not* destroyed. You shall take some trivial matter that distinguishes a man—some slight turn of a feature, some petty muscular trick even ; you shall observe it disappear utterly in his immediate offspring, and then your successors, if they watch closely, may find it turning up in his granddaughter's child. I could cite such instances in plenty—one or two of them within my own knowledge—and so, no doubt, could many of my audience. In like manner, a disease such as epilepsy, or the more intractable forms of neuralgia, cannot easily be supposed to leave *no* mark upon offspring subsequently begotten, even though no traceable result can be recognised in the second generation. It is in the supposition of such temporarily impalpable, but really imperishable traces, that I find the only possible solution of a multitude of vital and clinical facts. There is one example that I would especially press upon your notice, viz., the phenomena of true dipsomania or oinomania ; I do not mean the ordinary weakness of yielding gradually to the temptation of drink, but that much more singular affection in which the patient is periodically liable to unaccountable outbursts of drinking, which are in absolute and most hideous contrast with the remainder of his conduct in life. It seems to me that this is a striking example of that imperishable organic memory of the body, the existence of which Dr. Maudsley has so forcibly vindicated ; for although I have seen a considerable number of these cases, I have never met with a single one in which there had not been both drunkenness and some mental eccentricity, if not downright insanity, among the ancestors of the patient. In one case of the sort I was much struck by the fact that we had to search a long time before we came to the intemperate ancestor, but that when we had discovered him there was no doubt whatever of his influence upon the nervous type of the family organisation. Fortunately that influence, though extensive and affecting many individuals, was evidently not of the highest grade of strength, for I could find no further tendencies to drink, nor any positive insanity, among the des-

cendants of this forgotten drinker. And to this fact I felt myself compelled to attribute the recovery of my patient, which is the solitary instance of the kind that I have ever known. The true oinomaniac, as distinguished from the ordinary drinking sot, scarcely ever shakes himself free of his tendency; but then he almost invariably belongs to a race that has already been degenerated to the point which is marked by the frequent outbreak of insanity among its members.

It appears important to inquire—first, what are the signs, if any, of the Dormant Hereditary Neurosis in individual persons: and, secondly, what are the influences which have special power to bring out the hidden mischief?

Now as regards the signs of a dormant neurosis, I submit the following, not with absolute confidence, but still with a strong belief, to your notice.

The first that I shall mention is the premature occurrence of puberty in a child; premature, that is, as judged by the standard that prevails in the family. It has occurred to me several times to see this phenomenon of a precocious sexual development in children whose relatives were generally normal, some perhaps more than usually late, in coming to puberty, and I have never failed to observe neurotic mischief of one kind or another in after life. No doubt in many instances this precocity of sexual development is the direct result of bad habits acquired by the children at school; but it is not always so. Some boys, and a rather larger proportion of girls, surprise all their friends by a wonderful precocity of development, and yet are distinguished by the most childlike innocence. And no doubt in some English families the development of puberty naturally occurs very early, just as it does in tropical countries. But even in those instances where the precocity is quite *unnatural* to the family, and evidently has been at least assisted by the early acquirement of bad habits—even in these cases, I say, there is grave reason to doubt whether hereditary influence does not count for something. Upon this point I was much struck with what Dr. Hermann Weber lately told me. He said he was quite amazed at the amount of evidence which had come under his notice tending to show that masturbation in the young is at least very often the result far more of impulse, derived from innate temperament, than of accidental companionship with dirty-minded children. Now, as tending to prove that there is such a thing as a Dormant Hereditary Neurosis, I would point

attention to the fact that among families of which the prevailing sexual temperament is decidedly calm, we occasionally meet with a child (I have a recently observed instance in my mind at this moment) who, upon the smallest provocation or no provocation at all, takes to sexual thoughts and sexual acts with the energy of a demon. I believe that such an occurrence is no more an unmeaning result of chance than is the inflammation of the stomach which follows a drink of strong sulphuric acid. I believe that such an occurrence marks the fact that the old stain left in the family organization by some forgotten drunkard or lecher of the race is *not* wiped out; that for the individual himself there is certainly, and that for other members of the family there is possibly, neurotic danger looming in the future. I must here put in a caution against one possible source of mistake in this matter; the precocious puberty may be the purely accidental result of such causes as irritation of the testis by reason of its retention in the abdomen, or the inguinal canal, or irritation of the ovaries by worms, or by habitual loading of the bowels; and then of course no such prognostic inferences could be rightly drawn.

Among the signs that the neurotic temperament, previously dormant in the family, is about to reappear, I am afraid we must also, however reluctantly, notice the unexpected development of intense artistic feeling in children born of a family who are naturally common-place and prosaic. It is, however, a far less serious indication prognostically than is sexual precocity, for it admits of being turned to excellent account in the prophylactic treatment, if rightly managed.

The other grand indication of the revival of a hitherto dormant neurosis in a family, is the seemingly causeless occurrence of convulsions during dentition in a child whose brothers and sisters altogether escape the infliction; it being of course assumed that there are none of the ordinary and well understood accidental causes at work.

I might mention other matters which may, with more or less probability, be assigned as indications of a previously unsuspected neurotic temperament, and particularly such *novel* features as the unexpected development of a habit of *lying* or *stealing* in well-brought-up children. But of the force of such moral indications as these my friends, the alienist physicians, are far better judges than I.

And now, as regards the circumstances that especially tend to bring out the hidden mischief of a dormant neurosis, with

certainly evil results to the individual, and with the possible resurrection of an Active Hereditary Neurosis, once more casting abroad its "arrows, firebrands, and death" among a family that might have seemed to have escaped its dangers.

Time forces me to be very brief, but I shall specify the following:—"1st, deficient nutrition in childhood; 2nd, preponderance of emotion over steady intellectual work, in the ordinary brain-life of an individual; 3rd, the occurrence of phthisis more especially, but also of any disease which by involving protracted suppuration, or in any other way, exerts a prolonged and steady depressive action on nutrition. 4th, unwise intermarriages.

1. Upon the subject of the defective nutrition of infants and children, it is not now-a-days necessary to dwell so urgently as it would have been a very few years since. I fear, however, that there is still a large remnant in the profession of that extraordinary and most tyrannical superstition—that children are liable to "grossness of blood," if well fed, which has in its day been ten thousand times more murderous to human life than was ever the cholera or the plague. How it was even possible for scientific men to forget that a child *not merely lives but grows*, I cannot guess; but without wasting more breath than is necessary for one hearty imprecation on the stupidity of some of our ancestors in this respect, let me implore every one present to do his part to establish it as an unquestioned rule of practice, that (with proper attention to obvious matters as to its *quality*) the food of children up to, and especially during, the trying period of sexual development, should be practically unlimited except by the limits of appetite, or the occurrence of positive and unmistakable failure of primary digestion. And let this rule be enforced with most especial stringency in every case where the hereditary neurosis either confessedly exists, or from signs that we notice may be expected to revive.

2. The predominance of emotional over intellectual work, in the daily life, whether of child or adult, especially when this is associated with an absence or insufficiency of that habitual physical exercise which is so necessary to preserve the vital balance of the organism, is a most serious cause of evil. It is confessedly most disastrous in its action upon persons who are distinctly of a neurotic family type; but it can itself apparently create that type, or rather, as I believe, merely revive the dormant mischief which descends from a now forgotten genealogical source. The most intense type

of this emotional ascendancy is often seen in preachers of the rhetorical turn. I don't mean mere spouters, but really eloquent and earnest men, more especially if there mingles with their earnestness some considerable dash of ambition or love of spiritual power. And the neurotic result is apt to fall, as one might well expect it would fall, especially on the apparatus of circulation and of respiration. From inquiries that I have made, it is really appalling to learn how frequently clergymen of this type are partially or wholly disabled by neurotic asthma and neurotic angina pectoris. The first case that occurs to me is one which, from time to time in its treatment, has caused me great anxiety. It is that of a clerical gentleman, whose nervous system has really seemed, during a great number of years past, to be a mere playground for the whole tribe of so-called functional diseases. Thus, he has had spasmodic asthma for more than 20 years, and for the last five years neurotic angina pectoris in addition; some of the earlier attacks of the latter were so severe as nearly to prove fatal. Moreover, the angina is complicated with singular vaso-motor paralyses in the arms, and with the occasional appearance of psoriasis on the palms of the hands. Again, it should be mentioned that this gentleman has always been very liable to facial neuralgia, and that the attacks of this are frequently complicated with erysipelatoid inflammation of the kind which I have shown* to be a secondary result of neuralgic affections. And, finally, it should be said that the general temperament of this individual is eminently "nervous;" he has all the sensitive feeling, æsthetic taste, and rapidity of thought, that so constantly distinguish the "artist born." So remarkable were both the mental characteristics and the pathological sufferings of this patient, that I confidently presumed we should find, on inquiry, a strong family history of nervous disease; and it was, at first, a regular knock-down blow to me when I learned that the case was *very much the reverse*. This gentleman's information did not extend to more than two previous generations, and even for these was not absolutely complete; still, he was very decided in saying that, during that period, it had been notorious that his family had been exempt from nervous diseases, and, indeed, rather specially healthy and long-lived. This discovery for the moment seriously staggered me, and even induced me to waver in the belief which I had previously, and

* *Vide* Reynolds' System of Medicine, vol. ii. Art., "Neuralgia;" also my book, "Neuralgia, and Diseases that resemble it."

which I do now, most firmly entertain—that all the so-called functional disorders have really an organic basis, and that that organic basis is something capable of being transmitted from father to son. I may add that, last year only, I saw another case of neurotic angina, also in a clergyman, of which the general history and features were singularly like those of my first case. But in my latest reflections on the subject, I have found it impossible to believe that the morbid events, in either of these cases, was due entirely to the pressure of external circumstances, independently of any influence from original bodily constitution. It is true that, in my recent work on neuralgia, I have spoken of these and similar cases as examples of the creation of the neurotic temperament; and, for practical purposes, such as I had then chiefly in view, it is often useful to regard them in that light. But in addressing you, gentlemen, who are biologists, and are in the habit of believing that *ex nihilo nihil fit*, one should speak more precisely. And as the clinical facts of these two cases are precisely similar to those of very many other examples of asthma, and angina, and of the closely allied trigeminal neuralgia, which have come within my knowledge, and in which there *was* a distinct neurotic inheritance, I cannot seriously doubt that the evil was simply dormant, not non-existent, in these two patients, from the moment of their birth. It is of course not only clergymen that suffer from emotional excitants, nor is excessive *religious* emotion the only kind that wears and strains the life of the medulla oblongata and spinal cord centres of the cardiac and respiratory nerves; one of the most striking examples of neurotic angina that I ever saw occurred in an exceedingly able man, an engineer, who had suffered keen anxiety and disappointment at the failure of certain important schemes. There, too, the source of neurotic inheritance was not immediately obvious; but it existed, nevertheless.

3. The intrusion of *phthisis* into an individual case, or into the history of a family, has often a most disastrous influence in evoking a hereditary neurosis that was previously quite or nearly dormant. I commend to your attention, in this respect, the first of the medical genealogies (that of one of my sciatica patients) given in my work on neuralgia; it will be seen that the marriage of a somewhat neurotic person with a phthisical lady was productive far more strikingly of neurotic than of phthisical tendencies in the descendants. I could produce other instances, equally noteworthy. It does not seem

to me that there is anything more special in this influence of phthisis in heightening family neurotic tendencies, than is accounted for by its position as *facile princeps* among debilitating constitutional diseases. In this respect I decidedly incline rather to the view which (if I understand him rightly) Dr. Blandford takes in his interesting lectures on insanity, than to that of Moreau, of Tours, who, in his "Psychologie Morbide," seems to me to make an unnecessary mystery of the connection between the strumous diathesis and the neurotic cycle of diseases.

4. Lastly, among the influences which, if any can, do most undoubtedly assist the resurrection of a seemingly long-buried neurotic family temperament, we must certainly reckon the results of imprudent marriages. We have only to reflect on the continual intermixture of families which goes on, to perceive that small portions of the neurotic tendency must really by this period of the world's history have infected nearly every family that exists. Thus we must suppose that the essential elements of a potential neurosis exist, at any rate in the dormant form, on every side, and we are bound to seek some explanation of the fact that so many families escape, for generations together, anything like severe or active outbreaks of the neurotic tendency. I cannot doubt that the preservative agency is to be found, to a large extent, in the regeneration of families by the infusion of fresh and healthier blood by marriage. Surely the results of the opposite course are to be traced in the notorious facts on which is based the half-popular, half-scientific view that the marriages of first cousins are followed by the birth of unhealthy children, and that insanity and phthisis are especially often the curse of such offspring. I have seen nothing to lead me to believe that this really occurs, except in the instance where the family, two members of which thus breed in, is, or has been, somewhat strongly infected with the neurotic or the phthisical tendencies. But, doubtless, the reduplication, in the children of a husband and wife who belong to the same distinctly neurotic family, of the physical qualities that are the bane of the race, must multiply, in geometric rather than arithmetic ratio, the chances of disaster.

Time fails me, or I should much like to enter on a discussion, without which my paper must need seem incomplete, as to the educational prophylaxis—bodily and mental—which these views of hereditary neurosis, the Active and still more the Dormant, irresistibly suggest. I must reluctantly with-

hold it, but I would not conclude without one last word of a practical tendency. To some minds, and those among the most powerful in our profession, there is nothing but gloom in the prospect which these terrible facts of hereditary neurosis seem to present. It seems to them as if the "tyranny of our organisation" were not merely tremendous but altogether irresistible, as if our whole moral and physical nature were the mere sport and toy of an inexorable fate. I cannot share these opinions, or I should shrink in horror from the analysis of the facts. I believe, on the contrary, that this analysis really suggests the true method in which, by constantly acting on the rising generation, we may hope indefinitely to reduce the kind of dangers of which we have been speaking. *Venienti occurrere morbo* is not less true as a maxim of educational than of strictly medicinal means for stifling the first beginnings of mischief. The views I have now (most imperfectly as I well know) put before you, seem to point to us what these first beginnings are, and faint and glimmering though the picture be, I believe you may accept it as a not untrue foreshadowing of an improved organisation of our defensive warfare against disease, in which we may find the pledge of a true emancipation of the human race from many of the most painful consequences of the Neurotic Inheritance.

Feigned Attempts at Suicide. By DAVID NICOLSON, M.B. (Aberd.), Assistant Medical Officer, Her Majesty's Invalid Prison, Woking.

That our convict prisons should be the theatres upon whose stage are enacted day by day a varied round of farces and burlesques of a more or less tragical significance, is a thought whose development may be interesting, or simply amusing, according to the direction in which our fancy for the time being leads us.

One of the earliest features in the history of dramatic art in England was the introduction of what were called "Moralities." These plays, we are told, consisted in the personification of such allegorical characters as Charity, Sin, Death, Faith, and the like; and they were not unfrequently performed in churches, the clergy and the choir taking part in the representations. "Moralities" and the religious spectacles of

the day, such as that of our Lord's Nativity and Passion, or the "Slaughter of the Innocents," were performed on church festivals and other high occasions, and were calculated not only to impress the mind of the spectators with solemn considerations, but also to elevate its tone by offering it high subjects of reflection and contemplation. But, in order to effect such beneficial results, it was necessary that the performers should apply themselves to their task with the utmost purity and simplicity of intention, and that the on-lookers should be willing at least to give them credit for the possession of these qualifications. By a gradual process the drama became more and more secularised, until, as in the case with us now, we can scarcely bear to hear of such representations as the old Mysteries and Miracle Plays—as, for instance, the Ambergau Passion Play, which has recently startled so many of our countrymen with its wonderful impressiveness—without shuddering at the bare thought that some unreality of feeling, not to say mockery itself, might underlie the solemn delineations of the actors.

It is not the "Moralities," but their very antipodes, with which we have at present to do. No simple allegory is impersonated on the prison boards. There, as in keeping with the moral darkness of the place, do we find travestied with something of an earnest mockery almost all that is distressing in our humanity. Nor can the rôle be said to be an unvaried one; now the weaknesses and disorders of the body are depicted, now those of the mind. The common herd of players favour us with exhibitions of symptomatic complaints, as cough, diarrhoea, rheumatism, and the like. But there are those who aspire higher. The prison stage is not without its Garrick, its Kean, its Matthews, and, indeed, its Mrs. Siddons; but with these the development of the play is more complete, and in proportion as its requirements are more exacting, so the successful results are more satisfactory. The protracted helplessness of the paralytic, the recurrent and unconscious throes of the epileptic, the madman's incoherence and restlessness, form in themselves the groundwork of representations which, if well sustained, are masterpieces. For a one-act extravaganza nothing can exceed an attempt at suicide. The obscurity of its causation and the sympathy which it ought to excite render it rather a favourite with our farcical tragedian; not that its simulation is often a great success, but rather that it seems to fit in with the current and visionary notions of the schemer.

Suicide in Prison.—Before entering upon the subject of feigned attempts, let us look briefly at suicide in its reality as occurring in prison. People outside can readily imagine circumstances attached to the surroundings of a life in prison which would, in their opinion, cause them to long for death and even to summon its presence by some self-imposed violence. But what are the facts? We find that the population of the convict prisons for the ten years ending with 1869 averaged 7,331 per annum; 6,149 males and 1,182 females. The suicides were 19 (one female), giving an average annual mortality from suicide of $\cdot 25$ per 1,000.* In almost every instance the deed was committed in the earlier months of imprisonment; nine of them in Millbank, eight in Pentonville, and two at Portland. Very little is given in the Blue Books as to the state of mind in these cases, but we glean from the Pentonville reports that seven out of the eight suicides occurring there had shown no previous signs of depression or mental affection. In his report for 1864, the medical officer, Mr. Bradley, gives the following in full:—"Convict R. L. was found dead in his cell at the unlocking at six a.m. The body was suspended from the iron window frame of the cell by a rope of 'waxed ends,' as used by the prisoner at his trade of shoemaking. The feet were tied together by a pocket-handkerchief, and from the position of the cell table it would appear that after having arranged the noose the prisoner had swung himself off the table, and by that means secured a considerable 'drop.' On the prisoner's slate was found a letter addressed by him to his parents, in which he expressed a deliberate intention of suicide, assigning as the reason the difficulty of obtaining honest employment when liberated from prison, and the consequent probability of being driven to the commission of other crimes, and in the end murder. By suicide in prison he thought to save his father and mother the disgrace of his death upon the gallows. He had never shown any depression, despondency, or other mental symptom, and had been in good health up to the date of his death." This man, disbelieving in, or not calculating upon a hereafter, and looking merely at what are called his temporal relationships and probabilities, prefers to hang himself rather than face his difficulties; and he does it, not impulsively, but with a thoughtful consideration and anxiety for the feelings of his parents. Such a case

* I am indebted to the Registrar General for informing me that the number of suicides in England and Wales for the corresponding 10 years was 13,821; the average population being 20,987,086; this, however, includes all ages.

as this is rather an awkward one for Dr. Davey to get over when he asserts* that "the act of self murder is simply a sign or indication of brain disorder—a positive and prominent symptom of insanity," and "claims for the 'self murderer' his abolition or freedom from all and every responsibility." If all suicides are insane, as this statement assuredly would have us believe, then it follows that all who make *real*, though unsuccessful, attempts at suicide are insane.

On the plea that they are "tired of life," and wish to get "out of their misery," a good number of prisoners make *real attempts* at suicide of a somewhat decided character. These are usually found among the better behaved and tolerably respectable class of prisoners, who are liable to a despondency from which they are readily raised by a little encouragement. Dr. Guy, in his report for 1864, says—"Considering the peculiarly reckless and restless character of many of our prisoners, I must express my surprise and satisfaction that serious attempts at suicide are not more common."

Again, there is a large group made up of *Doubtful Attempts*—half real, half sham, and mostly impulsive, where, "without rhyme or reason," the prisoner in some reckless way appears to seek self-destruction. Such are more common with the female convicts, many of whose senseless and impulsive acts have a periodicity which serves to remove them from the category of actual pretences. One of this class, where there was no positive intention of suicide, yet where there was some real despondency, tried to strangle herself with her handkerchief, and told me that she did it because she was unable to read. Hysterical females, too, like to indulge in freaks of this sort.

Dr. Rendle, of Brixton Prison (Blue Book for 1867), referring to the rarity of suicide among female prisoners, says he has known of only one case of suicide in nearly twenty years, and subsequent evidence led him to the conclusion that the death was accidental.

It is impossible to arrive at any precise estimate of the relative proportion of feigned to other attempts, as only a passing mention is made of their occurrence in some of the prison reports, and as it not unfrequently happens that slight attempts are made without coming officially to notice. Taking Millbank Prison, where they are distinctly recorded by Mr. Gover, we find that in the three years ending with

* "Journ. of Ment. Science," Oct., 1870.

1869, there were 50 attempts in an average population of 963 (say 1,000), of which one was successful, 13 serious or doubtful, and 36 feigned.

Although considerable variation exists in the yearly numbers and in the different prisons, I think, taking it altogether, that a proportion of three feigned out of four attempts is pretty near the average; rather over than under, perhaps.

Amongst invalid convicts, as at this prison, attempts are rarely made. Dr. Campbell, the medical officer, tells me that since it was opened twelve years ago, there has been no suicide, and scarcely an attempt.

Convicts do not seek death; their love of life is a distinguishing characteristic. The surgeon is not long kept in ignorance of any suspected flaw in their bodily framework; and, indeed, their whole aim seems to lie in the direction of self-preservation, and to the same end point almost all their scheming devices and impostures. They have every right to cherish their own existence; and who is to blame them, if, failing to attain their object by the ordinary paths of conduct, they are willing, at all hazards, to try a little dodging?

Undoubtedly, the large proportion of suicidal attempts in prison are feigned, and it is to these we are more particularly to direct attention.

"Honest Iago" finds many a clever and many a poor representative in our prisons; hypocrisy and imposture, taking origin in the veriest trifles, shoot forth and display themselves in a countless host of devices and stratagems. The detection of these implies not only the punishment of the guilty, but also the protection of the straightforward.

Motive or Object.—Feigning, no matter in what form, whether of diseased conditions of body or mind, is simply a means to an end. What that end or motive is, is a subject the consideration of which is both interesting and important; interesting in the abstract; important as a practical problem which must occupy our minds during the investigation of particular cases. "Motive," says J. Mill,* "taken generically, is pleasure," inasmuch as they are each the "end of action, or that for which it is performed." Pleasure here includes "all the species of pleasure, and also the abatement of pains." Our own experiences make us acquainted with the operation of circumstances upon the mind as regards motives and pleasures in the ordinary run of life; but in the case of

* See note, p. 262, vol. ii., "Analysis of Human Mind." Ed. 1869.

prisoners—and it is with them we are now mainly engaged—other considerations have to be weighed. Seeing that pains or punishment is the normal feature of his existence, the prisoner can scarcely be said to experience pleasure, except in proportion as his punishment or his pains are removed; that is, he cannot start, free and unrestricted, from the ordinary social level of—say comfort, and bring to himself, by his own actions, positive pleasures in the way of additions to that comfort. He is on the minus side of comfort, and his pleasure is of a negative sort, implying the absence of pains which it is his first object to reduce. The attainment of the lesser evil must, therefore, in a general way, be looked upon as the pleasure or motive by which the prisoner is actuated.

The prison standard of conduct is by no means identical with the social. Society has expelled certain rebel members as unworthy her privileges; by her standard they are all bad, more or less. They are consigned to prison, and the prison code starts with them as all alike good, and on an equal footing; and in so far as they fall away from this by their subsequent conduct do they become indifferent or bad prisoners. It may happen that a very bad social specimen—a regular criminal, makes a good prisoner; and it may happen that the ordinary-going mortal, socially, who for once has been caught and convicted, gets into trouble and turns out an indifferent or bad prisoner. Prisoners, therefore, as prisoners, taken officially, are good and bad, apart from the degree of their social or moral shortcomings. The good prisoner avoiding reports, and doing what is required of him, gives no trouble, and thus manages, by obtaining certain privileges, to remove some of the more unpleasant aspects, moral or physical, of his imprisonment. He may, indeed, be naturally industrious and quiet, or he may be a “downy cove,” an old and cunning hand, who, disliking work and discipline, yet manages to rub along smoothly, by tact, *finesse*, and a certain amount of shuffling and occasional feigning. On the other hand, the bad prisoner is prominent, quarrelsome, idle, and uproarious. He has forfeited all his privileges, becomes very abusive, and is often under punishment. He is driven into a corner, and is obliged to resort at last to scheming and imposture (if disease in reality, resulting in a great measure from his conduct, does not anticipate him), in the hope of improving his condition. It is thus seen that the attainment of the lesser evil (a comparative pleasure) is the mainspring of action with the prisoner, whether he is, or is not, an im-

postor. The probability of certain appearances being feigned is heightened in proportion as the individual has a bad character, and there appears a strong immediate motive for deception.

Suicide is feigned in our midst as well as in our prisons. The daily press tells us but too frequently of the foolish lover who clamorously hangs himself up by the neck to spite the faithless Mary Ann; of the professional suicide who, by a sham drowning, fills his pockets at the expense of a befooled philanthropy; and of the drunken night-brawler and bedizened hag, who, for the sake of fuss, flaunt in shallow waters or try a throttling with their garter. The pettish and spoilt child too, has found in a pretended self-destruction a successful means of appeal to the over-weening affection of its parent. Where they are not the mere effervescence of an intoxicated brain, such attempts are made with the view of working upon the feelings of friends and relatives, or of extorting money from charity-stricken bystanders. The prisoner knows that the official sympathetic system is not that of an anomalous public, and he is careful not to play too much upon it alone. He may contrive to cause a tingle in some of its chords by his move, but essentially he aims at the practical.

The circumstances or motives under which suicide is feigned in prison may, for convenience sake, be arranged under three heads:—

I. It has relation to some present punishment within the prison. The attempt is made, perhaps, in the hope of escaping from the punishment; or the prisoner thinks he has been wrongfully punished, and being unable otherwise to obtain the satisfaction he would like, he tries thus, through his own person, to annoy the offender, whose unkindness is supposed to have driven him to the rash act. Something on the principle of the wayward child with its ungratifying parent.

II. It is a part of the process of Feigned Insanity, being usually the introductory feature when it is present in a case. Out of 18 cases of Feigned Insanity which I have recorded,* there were seven in which the feigned suicidal propensity appeared—three were by hanging, three by starvation, and one cut throat—none of them very determinedly feigned. Here the act is taken into consideration as subsidiary to the question as to the state of the mind.

III. The attempt is done in order to effect a diversion.

* "Journal of Mental Science," Jan., 1870.

This comprehends a great variety of cases where some minor object is in view. To get away from some working party or officer, to get into hospital, to avoid a report, to give trouble and acquire sympathy, are some of the ideas that prompt the prisoner to feign suicide.

The mere pretence of suicide from its simple character is not a promising form of imposture; for, although the bait takes, it does not necessarily follow that the schemer attains his end. When it is the sole performance and not merely the opening scene of a more prolonged imposition, it is frequently prompted by motives as trivial as they are varied.

When the prisoner has made up his mind to feign suicide, it is necessary for him to make some calculations as to the time; and as a rule he arranges that the performance shall be in full play when his cell-door is opened at one or other of the accustomed visits of the officer. Of the many cases that occurred while I was at Portland I cannot call to mind one that took place while the prisoner was out on the works; they were all done within the prison walls, and usually in the evening.

Probably when, in the usual course, his cell door is opened to remove his supper tin, the prisoner is found suspended to the gas-pipe or towel-peg. He is cut down, and the doctor is sent for, who finds on arrival that prisoner Jones—and Jones (alias—Jones) is a favourite patronymic among them—has been carried to the hospital on the shoulders of half-a-dozen of his fellows, after vain attempts at restoration by cold affusion. Jones lies supine and helpless, the victim of a hard fate, with his clothes all loose and awry, his breathing suspiciously quiet, and his eyes shut—a blank, apparently, to the outer world, unconscious and unheeding—still Jones's heart beats hopefully; his pulse is good; his face gives no token of arrested circulation, nor does the neck present any pressure marks. When the unwilling eyelids are pushed apart, the eye shows uncommonly white, but is sensitive to the touch. Jones is shaken, and, in consideration of his state, he is spoken to in rather a loud tone; but he takes no heed until the process has been repeated several times or the ammonia bottle applied to his nose. He then moves his hand up to his face, and perhaps rubs his eyes, or gives an irrepressible sort of cough. When he manages to get his eyes open, he appears dreamy and at a loss to know where he is. The last thing that recovers itself is his tongue. You have got him to sit on his bed, perhaps to

stand up on his legs, but he will not speak, or, after a time, he may mumble that he is "tired of life." Meanwhile Jones is not an unknown character; he hates work; he has tried minor deceptions; he has been reported and punished more frequently than effectually; and the officer tells of the discovery at the after-supper visit, and adds that the prisoner is under report. These circumstantialia, added to the immediate evidence of the case, convict Jones of imposture, and the end of the serio-comic display is that he is relegated to the discipline department for his reward. Such is, with, of course, more or less modification of detail, the style of the mock suicide. In most cases he has recovered before the doctor arrives; and in the presumptive evidence, elements of doubt as to the state of mind may arise, and it may be deemed necessary to submit the case for further observation. A doubtful state of mind (in the direction of melancholy) continues for days, or it may be weeks, and the prisoner in the end may either escape by an implied confession of his imposture, and a promise to behave better for the future; or if there has been more reality in the case, the prisoner is not discharged until he is brought into a better frame of mind, and acknowledges the folly of his act. It is impossible for the prison surgeon to forget that there are features essentially depressing in the monotony and restriction of a life in prison, and in genuine cases, where the mind threatens to give way, he cannot fail to notice the effect which a little wholesome advice and kindness have in restoring and reassuring the tottering intelligence.

Method of Attempt.—The impostor, in deciding upon the particular game that he is to play, must be guided more or less by his own circumstances, and by the possibilities which he has of carrying that game to a successful issue. Accordingly it happens that the feigner of suicide in prison is restricted in some directions, and has to fall back upon plans that would be less suitable, perhaps, or less likely to be successful, outside. Thus *drowning*, common enough outside, cannot well be feigned in prison, and sham *self-poisoning*, occasionally resorted to in public, is not heard of among prisoners. On the other hand, feigned *cut throat* is pretty often attempted amongst convicts, while it is seldom tried in ordinary life—and the same may be said of the less frequent mode by *precipitation from a height*.

Judging generally, and not from precise data, the following

are the usual methods resorted to among prisoners in the order of frequency :—

1. Hanging and strangulation.
2. Cut throat and other flesh wounds.
3. Starvation.
4. Precipitation from a height.

Hanging and Strangulation.—These are, whether taken singly or together, the favourites with the feigned suicide, and we shall consider them together, as from the fact that the prisoner's cell cannot give him a good "drop," they are often combined in the same case. This plan is well adapted to the circumstances of the prisoner. The necessary appliances are always at hand, and there is a sensational cast about it that does not attach to other plans. The preliminaries imply more of a calculating resolve and determination, and therefore more depth of despair, than does the rashness that would seem to characterise the cut-throat. It is exceedingly effective in appearances. The operation of cutting-down is valuable in itself as creating a fuss ; while a semblance of seriousness is given to the case if the simulator can steel himself to the restorative influence of cold water. The brace, garter, belt, or a piece of cord, is generally used, and the would-be suicide attaches himself to the ventilator, the gas-pipe, or clothes'-peg in his cell. The height is limited, and therefore generally convenient enough for safety ; but the position may, nevertheless, be made to appear sufficiently awkward and dangerous. Not unfrequently he hangs forwards from the wall with his knees close to, or touching, the ground. Sometimes one, more reckless, and not caring for the additional punishment which the act may involve, tears up his sheeting or his shirt, and makes a rope of that. I well remember a Yankee hero making a mild attempt in this way. At Gibraltar, in 1869, a prisoner adopted a ready-made noose, and got himself up by sticking his head through the arm-hole of his waist-coat !

Strangulation is usually attempted by means of the handkerchief ;—one fellow in Millbank tied his handkerchief tightly round his neck, and pulled it, remarking to his officer "I will choke myself in your sight." But this method is much more frequent among females. I chanced to see, with Dr. Askham, in the female prison here, a case where the woman, a very bad character, had made a pretended attempt of this sort just when she expected to be visited. She had, in her temper,

for several nights refused to take her supper into her cell, but on this occasion she took it in and thus knew they would open her door to get the empty basin, and had made the attempt accordingly. She afterwards feigned insensibility, with a nervous twitching of the mouth, and firmly closed eyelids; a little flapping with a wet towel soon brought her round, and she confessed her imposture. Another female in Millbank sat up at midnight in bed, and tied a piece of her dress round her throat, her fellows lying awake in the ward.

When hanging and strangulation are resorted to there is much sameness in the proceedings, and so, indeed, is there in any of the plans adopted.

Cut-throat.—Feigned attempts of this sort are usually very slight and unsuccessful. The risk of doing a good cut-throat, and the want of effect unless blood is freely outpoured, to say nothing of the pain arising from the wound made by an improper tool, render this a very unsatisfactory mode. Yet wounds in the throat are frequently made by these schemers; but seldom are they of any account. They generally consist of a few scratches made on the side of the neck with a piece of glass, or their tin knife is rubbed up and made to do duty in this way. In one feigned case I remember the prisoner made two stabs in the right side of his neck with a piece of sharpened crinoline steel. The wounds were angular, and formed by the double movement of entrance and exit: one of them bled rather freely, and required a stitch. The following singular case happened also at Portland, and was treated by the medical officer:—D. H., a very troublesome character, had, with one hand, drawn forward the skin over the Pomum Adami, and with some sharp instrument made an upward cut, detaching a piece of integument about the size of a half-crown, and exposing the platysma myoides—a few fibres of which, as well as a small vessel at the lower end of the wound, were cut.

Other attempts by wounding comprise cases where the bloodvessels, of the arm chiefly, are searched for, and approached by laceration or piecemeal picking. These are probably done by way of variety, for it does not do for schemers always to be running in the same groove.

Starvation by the refusal of food may be resorted to (although not always in pretence of suicide) by the impostor either while feigning insanity or while under punishment, as a means of spiting some authority by resenting the supposed

grievance, as already referred to. Here the starvation is real enough, the object being ostensibly, but not really, thus to effect death. I have seen cases of the sort ranging from two or three up to nine days. Usually no evil results follow, but occasionally gastric derangement and irritability are set up, with debility and foul breath. When prompted by a spirit of resentment, the continued refusal of food implies a savageness of disposition that may now and again lose itself in actual insanity. Indeed possibly enough in some cases, some amount of insanity may have been the primary cause not only of the starvation, but also of the offence which gave rise to the punishment. But in solitary occurrences, without previous indications of mental disorder, this latter way of looking at it would not only be unwarrantable but perhaps hazardous, dealing as we are with criminals.

Feigned suicide by starvation involves more real self-torture than any of the other methods, and from the fact of its being sometimes prolonged, the question of treatment is for once brought in. At first it is better, after trying kind words and expostulation, to tell the prisoner how utterly indifferent everyone is how long he goes without his food, and that he is only hurting himself. If he still proves obstinate, after a while the stomach pump may be used; but a system of beef-tea enemata is very effective, as it is felt to be anything but an agreeable or manly mode of ingestion.

Precipitation from a height is not very often resorted to. Such attempts probably originate in some quarrel, and then the feigning is mixed up with a certain impetuosity which leads on to the commission of an act which is not only rash in itself but has all the appearance of being suicidal. One prisoner tells me that when in Birmingham gaol he made an attempt of this sort with a view of getting a change of officer. And he succeeded; for he was taken for a time into hospital. He says he knew what he was about and had no intention of destroying himself. A prisoner at Portland was to be reported by his officer for some offence, and he jumped over the balustrade of the landing, a considerable height; he contrived greatly to break the fall by catching at the edge of the landing in his descent and thus guiding himself to within a few feet of the ground. He, nevertheless, pretended to have seriously injured his ankle, and assumed great dejection of spirits. Dr. Guy, in one of his reports for Millbank Prison, mentions the case of a female there who "lowered herself partly down from the gallery to the basement part of the

chapel, then fell the remaining distance, thereby injuring her wrist." This attempt was "only intended to inflict such an amount of injury as might give trouble to others and cause her to be admitted into the infirmary."

Feigned Attempts among the Insane.—I find this note in Griesinger;* "cases also occur in which persons actually *simulate* attempts at suicide; it does not, however, follow that the *mental disease* is simulated. Morel, in the 'Ann. Med. Psychol.' vi. 1854, p. 84, mentions a case of this description." The cunning and deceit which are often practised by the insane prepare us in a measure for the possibility of such occurrences; but although Asylum Superintendents speak of having met with cases of the sort, the subject is not taken up in works on insanity. Actually feigned attempts among the positively insane, Dr. Maudsley tells me, he believes to be uncommon; and indeed it seems to me to be rather a difficult matter to explain their occurrence at all. Feigning implies, necessitates, the existence of motive—such a motive as may be called rational, and to detect its presence as co-existent with positive insanity is surely no simple task. In cases of moral insanity, and in insane people during the abeyance of morbid manifestations, the existence of motive and of feigning might certainly be inferred, as under such circumstances there is the likelihood of a freer play of healthy idea. Silly and undetermined attempts, *apparently motiveless*, are made among the insane and are put down as characteristic of their mental defect. Attempts of a similar nature are made by some criminals of a low type. But something must incite to the commission of the act, and here we have a common ground upon which the two sets meet. How far these two may have an irrational or abnormal motive peculiar to each, or common to both (and therefore proving both insane), is a question beyond our present scope.

Risks.—It is an awkward thing for anyone to try experiments with his neck in a noose; and it is not to be wondered at if now and again the impostor is caught in his own trap; and if his mock hanging sometimes results in dangerous, if not fatal, asphyxiation. He may be very careful in his plans, and adopt measures by which the risk is reduced; as by placing the noose upon the chin, which some try; but such clumsy expedients can hardly fail to betray. Accidents are beyond his calculation; and when he arranges things more

* On Ment. Dis. Syd. Socy. Edit., p. 259.

secundum artem may he not make an accidental slip, become flurried, or mistime his manœuvre? Dr. Burns relates the following as having occurred at Chatham Prison in 1861:—“A prisoner suspended himself by means of his braces tied round his neck from the ventilator over his cell door at five a.m.; he was with difficulty recovered, the pressure necessary to open the door to reach him, having nearly completed strangulation; he appeared to be of perfectly sound mind, and had no intention of completing the act, but merely to create a sensation for the purpose of procuring mitigation of punishment for some offence he had committed.” He must have “created a sensation” which he did not bargain for. Mr. Askham tells me of a case somewhat similar, which occurred at Dartmoor, where a prisoner hung himself in this way, expecting the customary visit of the warder. On this particular occasion the officer began at the opposite end of the hall, and when he came to this man’s cell, he found him all but dead. Being brought round with some difficulty, he confessed his imposture, and said he thought the officer would visit his cell first as usual. A little longer delay would have been death to this man. While I write the following appears in the *Standard*:—

Mr. Langham, the deputy coroner, held an inquest in the Millbank Prison on the body of a female convict named Margaret Corhill, aged 31, who was admitted into the prison on the 1st of July, 1868, under sentence of seven years’ penal servitude. The deceased, it appeared, had led a shocking life, the last conviction being the fifth, the crime in each case being larceny. During the time she had been in prison on this occasion she had been reported 31 times, and had been punished seven times, on each occasion being put upon bread and water, sometimes for one day and at other times for three days. She was put to knitting, but it was seldom she would work, and used to indulge in most violent conduct, and abuse the attendants. She preferred solitary confinement to mingling with other prisoners. On Saturday evening she was put into her cell, and was visited by one of the under matrons three times during Sunday forenoon up to eleven o’clock. At a quarter past that hour, on one of the female attendants again entering her cell, she found her suspended by a pocket handkerchief, which she had passed round her neck and fastened to the window. The chief matron entered and removed the handkerchief, and sent for the resident medical attendant, who came immediately, and tried for half an hour to restore suspended animation, but it was useless. The chief matron and the surgeon were of opinion that the deceased did not intend to destroy her life, but only to frighten the attendants, which had frequently been the case with other prisoners before. In the absence

of any direct evidence on that point the jury returned a verdict to the effect that the deceased destroyed her life by hanging, but whether by accident or by design there was not sufficient evidence to prove.

Feigned Threats.—There is something uncomfortable in the feeling that someone, a friend probably, has entrusted you with the secret of his intended self-destruction; and it would rise into painful regret should the fatal act be accomplished while you, the repository of the secret, looking at it as an idle or momentary threat, did not think it worth while to take preventive measures. Perhaps, rather than burden yourself with the responsibility, you have given way to some conditional demand made upon yourself. On the other side, there may be a reality of intention; but more often the threat is feigned with the view of obtaining some request. Our self-consciousness reveals to us the existence of a sympathetic influence which one individual may exert over another in this direction; and this influence is applied or misapplied, with more or less prominence in our every-day experiences. The very child utilizes it by taking to its room in a pet, and denying itself its accustomed pleasures, and threatening self-violence because some request is not acceded to—and the tolerant affection of the parent is not able to resist this. “I’d rather go without it altogether,” says the adult, if he does not get it just as he wishes. And in this spirit does the suicidal threat, whether real or feigned, take its rise. Even the feigned threat has some real foundation, as being prompted by a feeling of disappointment; but beyond this it is simply a make-believe, in the hope of overcoming a difficulty. Prisoners very often try to work upon their officers in this way, and more especially, perhaps, female prisoners. In his report for 1867, Dr. Rendle, of Brixton Prison, says: “Badly conducted women occasionally give a vast amount of trouble and anxiety to their officers by threatened attempts to commit self-destruction.” If prisoners were to be given way to under such circumstances, an incalculable amount of trouble and mischief would result.

Feigned Suicide has some interest in a *medico-legal* point of view. The common sham-drowning is usually only a matter between the policeman and magistrate; but cases occur of a more complicated character, in which medical testimony is indispensable; as where pretended poisoning and its symptoms are imputed to the agency of another. Several cases of this sort are mentioned by Christison in his “*Treatise on Poisons.*” As a rule, however, the would-be suicide is well known to the

“Authorities,” and any punishment that overtakes him is richly deserved. It cannot be easy always to arrive at the precise state of the mind in all cases; for acts seemingly of a suicidal nature may be committed from desperation and rashness, without any positive intention on the part of the individual to “do away” with himself. Practically, however, they come to be placed on the same footing, for in such cases, as well as in instances of real and of feigned attempts, the individuals render themselves amenable to the law.

No doubt even more frequent exhibitions of real and false attempts would be submitted to us, were it not for the operation of the principle that guided the Laird of Drum’s “Fool.” This worthy, as I am kindly informed by the estimable lady of the Castle, first tried to strangle himself with his “gravat” and then to drown himself in the river, but gave up trying on the plea that he “cou’dna get nae breath” either way. This fossil-like relic of a by-gone age is now in his eighty-third year, and sings to himself “diddlies,” of which he has an unlimited store.

The feigner proportions his attempt to the amount of personal inconvenience and risk which he thinks he can stand, but takes good care generally not to hurt himself much.

On Some of the Modern Teachings of Insanity. By EDGAR SHEPPARD, M.D., Professor of Psychological Medicine in King’s College, London, and Medical Superintendent of the Male Department of Colney Hatch Asylum.

I am desirous of making a few critical remarks upon the address of its President, read before the Medico-Psychological Association in August last, as also upon some of the observations which were elicited thereby from various members at the time of its delivery.

It is strange that those who have been given to teach us somewhat dogmatically should step forward to fill us with doubt and suspicion as to our antecedent theories and practice. But we live in an age of paradoxes, and must, I suppose, be grateful to those who, at a period which “seems to lack the originating impulse,” will “break through the usual routine of thought and action,” and flood us with new and inspiring ideas. And yet “the originating impulse” is calculated to suggest misgivings as to the soundness and stability of those

who set themselves up for pioneers. The dictum of to-day, so clear and precise, is obscured by the dictum of to-morrow. We are called upon to retrace our steps, and reconsider, perhaps, both our premisses and conclusions.

Let us examine a little closely this Presidential teaching; for I do not mean for a moment to imply that it does not contain much which, though startling to the conventional mind, is pregnant with true philosophy. Notably so in reference to the *Management of a Predisposition to Insanity*.

It has always seemed to me that our duties as psychologists should lead us to handle much more largely than we are wont to do, and yet with the greatest delicacy and tact, this very interesting question. The saying of Descartes (quoted by Dr. Maudsley) may or may not be true, that "If it be possible to perfect mankind, the means of doing so will be found in the medical sciences." It would be truer wisdom, perhaps, to say that such means rest rather with the science of physical and moral education. We cannot begin too early, for a substratum of mischief is unwittingly laid even in the cradles of countless children, by fond but unmeaning parents, and becomes a *predisposing cause* of insanity. Unfortunately, however, the opportunity of beginning early is not readily afforded to us. If foolish stumbling blocks are thrown by foolish parents (as so frequently happens) in the way of those who have no insane cloggings, and prove to exercise a prejudicial effect upon the moral health, how much more likely are they to be thrust in the path of, and do violence to, those who are weighted with the desperate heritage of an insane temperament? Even at that period when the sacred symbol of redemption is signed upon the infant brow a curse may be mingled with the blessing, and a stupid baptismal name, or the thoughtless arrangement of the initial letters of names not in themselves objectionable, may injuriously affect all the future of one who might otherwise have done well. Take, for example, such a case as this. A child's patronymic begins with the letter S. His parents give him two names beginning respectively with the letters A and S—Arthur Samuel Smith, say. What is the result? He goes to a public school, when at once he is pointed at, and written down ASS. Or parental piety may have dubbed the infant Zachariah, or parental vanity may have crowded upon him the most ambitious accumulation of Christian prefixes. The smallest body may be welded with the smallest mind in the personality of a Charles Augustus Frederick Plantagenet Smith. Children thus named are at

a disadvantage from their earliest years (even in the nursery the petty tyranny begins) with those who bear more sober and discreet appellations.

It may seem absurd, perhaps, to many, thus to speak of these trifles of nomenclature. But they are not trifles if they are pregnant with great influences, and I am persuaded, from what I have seen and heard of public schools, that the power for evil which a matter of this kind exercises over certain temperaments of the neuropathic type is both large and fruitful. It is not every child who can bear to be laughed at. The devil himself, Luther remarked, will turn tail and run like a fool at ridicule. To subject a child, under even the most favourable circumstances, to the shocks and jars of a public school is no trifling experiment. To invite the taunts and gibes of others is a dangerous and unnecessary complication of a process, even at the best, not remarkable for its simplicity. The tender brain-cells require the most delicate handling under the educational pressure to which they are about to be subjected. But the brain-cells of John and Ebenezer, though strictly identical in their physiological and chemical structure, are not equally weighted in the coming race, if the name of the one is a stumbling block of ridicule, while that of the other fails to evoke remark or comment.

If the influences for evil are thus so thoughtlessly generated in the cradle, it is obvious that others, both for it and for good, are constantly being called into play, not only in the nursery and the schoolroom, but in all the social surroundings which take their colouring from the members of the family circle. We have it in the general habits of the household, in the meek or turbulent tempers, the strong or feeble wills, of its individualities; in the authority exercised by one parent, or both, or neither, upon those to whom, in obedience to a sexual law, they have given their own shape and form, and let loose upon "that vast rolling vehicle the world, the end of whose journey is everywhere and nowhere."

Nor is it less clear that the religious belief of every family, and the different mode of dealing with religious questions by those who possess the same belief, may seriously affect the finite future of its every member. But it is a difficult question to touch upon, and Dr. Clouston seems to have been somewhat alarmed at what he terms (unjustly as it seems to me) the "utter and entire scepticism" of the President. I confess to perceiving a large measure of true and thoughtful philosophy in Dr. Maudsley's allusion to this delicate subject, and I

venture to share with him the responsibility of believing that mankind has learned more practical morality from certain scientific discoveries than from half its creeds.

There is nothing more certain than that erroneous views are given to young children, as to the objects and offices of prayer, by which they are taught to ignore the most obvious physical conditions, and leave to a higher power work which a higher power has already given them the means and opportunity of performing. They are instructed that God will do all that they want if they will only pray for it persistently; but the wisdom of the proverb is never put before them, that "God is a good worker, but He loves to be helped," and so, failing in the exercise of an already imparted *will*, they begin to cast about to discover the causes of their failure, and embark upon that miserable system of analysing thoughts and feelings which ever eventuates in pusillanimity and feebleness of character. Mental introversion is ruin to the young; repeated acts of self-anatomy are a fertile cause of insanity. This subject could not better be illustrated than by reference to the case of a nervous child who has contracted the habit of blinking and making facial contortions—a habit which grows upon youth with great rapidity. A strong effort of the *will*, enforced by persevering efforts at muscular repose, will soon establish the desired condition. But with a certain school of religionists such an effort would be scarcely possible, because the principle of that school would not admit to the child the existence of the will. The *neurosis* would not disappear, and the unhappy sufferer would be taught to pray more fervently, and subject himself to more intense self-scrutiny. This false teaching is the parent of infidelity, for the multiform seekings of the earnest mind are so fruitless in their sequences that it is ultimately led to unbelief, or to a miserable conviction that it is the object of a special judgment from above. No healthy, mental action can possibly exist under such a system as this. What is called religious insanity is one of its inevitable results. I have never forgotten what a good Christian philosopher once said to me, that there are but two things for which men ought to pray, viz., for grace and mercy. In doing this we fulfil all the requirements of a healthy religion, and we leave untouched in their beauty and harmony those natural phenomena which never fail in their obedience to a universal law. But half the prayers of the devout community are offered up for the performance of absolute miracles, and for officious interference with the most perfect mechanism. We

ask for fine weather when we are tired of rain, and for rain when we are tired of fine weather, each according to the measure of his caprice and of his little wants; we ask for new brains when we have permanently impaired the old ones, under laws and conditions as certain as the daily revolution of the earth upon its own axis. Failing to regard the book of nature in the right spirit, we come not to see that (as Professor Tyndall expresses it) "touched by the wand of law the dross of facts becomes gold, the meanest being raised thereby to brotherhood with the highest."

It is of paramount importance, then, that all who are concerned in the education of the young—especially in the management of those who have any kind of *neurosis*—should engage their pupils in a religion which does not paralyse the *will*, seeking by prayer for gifts which have been already bestowed; which does not ignore the teachings of science, and the natural phenomena of the material world; which admits "the morality of clean blood," expounding that "the physical is the substratum of the spiritual," and so "giving to the food we eat and the air we breathe a transcendental significance." A bad education—an education which is not up to the light of its day—may become "a wicked broth," as subtle and potent as that which Lucilla gave to her liege lord, the Roman poet and philosopher—

"Confused the chemic labour of the blood,
And tickling the brute brain within the man's,
Made havoc among those tender cells, and check'd
His power to shape."

I cannot help thinking that Dr. Maudsley has done a real service to the cause of science by boldly proclaiming his views upon the question of education, and attempting to divorce morality from the exclusive possession of religion. The laws of nature and of morality are intimately blended, and avenging consequences are equally the result of their infraction. "There is nothing (he truly says) accidental, nothing supernatural, in the impulse to do right, or the impulse to do wrong; they both come by inheritance or by education. To ascribe one to the grace of heaven, and the other to the malice of the devil, is an explanation which may satisfy the religious sentiment, but which can have no place in a philosophy or science of mind. As an explanation, indeed, it is upon a par with that which formerly accounted for insanity as a possession of the devil." What is needed is a little more of the Socratic

spirit, and a little less of the conventional religious sentiment. Our youngsters would then have more "stiffness of fibre" in their natures, and would school themselves into the most complete masterhood of their volitions. "To judge from your looks," said some one to the Athenian philosopher, "you are the best tempered man in the world." "Then my looks belie me," was the reply; "I have the worst possible temper by nature, with the strongest possible control over it by philosophy."* Knowing as we do the potentiality, whether for good or evil, of example, it is one of our first duties as physicians and men of science to counsel the removal of young persons from all those surroundings which are favourable to the development of latent mischief—as in the case of a bad ancestral taint. A nervous child should be placed in a "strong-minded" family, that is, with those who, having the will in complete domination, never allow themselves to be betrayed into doubt or vacillation. The melancholy should consort with the cheerful; the unduly hilarious with the more sober-minded and discreet. The wandering and vacant should be won to interest by comparatively sensational modes of placing things before them, their perceptive and reflective faculties being alike encouraged. Above all, the timid and introverting, having exaggerated religious feelings, and a belief in constant personal interferences and judgments from the Deity, should be placed with one of the school which is muscularly Christian and philosophically Socratic. These adjustments of individual temperaments and dispositions are the basis of true education; and society owes all her wellbeing to their observance. Each plant to its own peculiar soil: thus only can we discover its capacity for growth and beauty.

Before we quit the subject of the power of the *will*, we may express our satisfaction that Dr. Bucknill gives the weight of his authority and experience in support of the opinion that a large number of individuals having a tendency to become insane, have the power to resist the same if they can only be taught to exercise it. And this only renders more necessary that transplantation to a congenial soil which we have just alluded to. The same power is possessed by the insane themselves in a much larger degree than is generally supposed;

* No more distressing instance of exaggerated religious feeling is to be found in history than that of the poet Cowper. Had he been brought up in a different school of thought he probably would not have placed on record, "My feelings are all of the intense kind. Satan is ever plying me with horrible visions and more horrible voices."

and it is within my own experience that numbers of the very maddest of our asylum inmates may partially educate themselves to control, if not altogether to suppress, those periodical outbreaks of temper and excitement to which they are so singularly obnoxious.

We come now to the consideration of that most difficult socio-physiological question, the propriety of forbidding marriage in those who would bring to the nuptial bed the ancestral ingredient of epilepsy or insanity. I am asked the question over and over again by those who have a distressing personal interest in my professional judgment upon this point. And there can be but one sound answer. For a person charged with the insane temperament, acquired from his forefathers, to marry, is at once to defy the laws of nature and morality, and invite those avenging sequences which need no spiritual guidance for their correct interpretation. But however strong and unanimous the professional judgment may be upon this point, it is quite certain that the subject is one on which there can never be any legislative interference. For, after all, if the law could step in and say "thou shalt not marry" to a certified member of a caste, it could not say, or could not enforce an edict, "thou shalt not copulate." It is one thing, however, to lessen the number of marriages, and another to lessen the number of illegitimate children. Connexions would equally be made, if not marriages, in violation of the laws of a healthy physiology; and the various anomalies of enervation would repeat themselves with a sure and retributive speed. Unfortunately the *neuropathia psychica sexualis* is one of the most frequent accompaniments of the insane and epileptic temperaments, and if it find not its legitimate indulgence it seeks an outlet in that pernicious habit which "grows by what it feeds on," and can "outlive and kill a thousand virtues." We have no power, and we never shall have any power to prevent the marriage of persons "weighted with the tyranny of a bad organization." First of all, it is so hard to determine the measure of baneful ancestral influence which should preclude an individual from continuing his species, as to make any attempt at legislative prohibition quite impossible. Secondly, the freaks and vagaries of the *neuroses* are so multi-form as to render any classification of individual cases a matter of extreme difficulty. Terrible, then, as are sometimes the consequences, we must grin and bear these morbid interlacings, deriving some consolation from the circumstance that there is an unmistakable tendency in all faulty organizations to die out and become extinct. Happily the measure

of the sexual appetite is not the measure of the propagating power. There is yet another reason, too, which tends to lessen our apprehensions of the evil results of alliances between those who are the subjects of an inherited or idiopathic insan diathesis. Dr. Maudsley puts the matter forward in rather a startling manner; I venture, therefore, to quote his entire paragraph:—"Let it be supposed certain that a person will have children, one or more of whom will go mad, it might still happen that the world would gain more by one of the children who did not, than it would lose by those who did, go mad. In that case, would not his marriage, grievous as it might be to individuals, be amply justified by the good done to the race? So far as we see, nature is not in the habit of making much account of the individual and his sufferings—is singularly lavish in the production and reckless in the destruction of life; of all the multitude of living germs produced, but an infinitesimal proportion ever reaches maturity; and it may well be, therefore, in the order of its evolution, that countless thousands of individuals should suffer and perish without result—as waste life. If, then, one man of genius were produced at the cost of one thousand, nay, at the cost of fifty thousand, insane persons, the result might be a sufficient compensation for the terrible cost." And, he continues, that, whether this is or is not so, he has long had a suspicion that mankind is indebted for much of its originality, and for certain special forms of genius, to individuals who, themselves, directly or indirectly, have sprung from families in which there is some predisposition to insanity. It is indeed unfortunate for the country and the ratepayers that only one genius can be eliminated from fifty thousand lunatics, and we doubt whether society will ever be satisfied with such a bargain. It may suit posterity; but then, as posterity never did anything for us, we may be excused if we take but little interest in posterity. Be this, however, as it may, there is no novelty in the opinion of a league existing between insanity and the highest forms of intelligence. "*Nullum magnum ingenium sine mixturâ dementiæ*," was the saying of Aristotle; and that which he wrote centuries ago may, in some sense, express the more recent revelations of morbid psychology. M. Moreau has already investigated this interesting question, and brought together "a cloud of witnesses," "an aristocracy of talent," to prove the existence of this alliance. And, the existence once proved, it follows by parity of reasoning, that the procreative power of the intellectual has the same proclivity as that of the insane; first, towards the production of feeble

and faulty organizations, and, ultimately, to decay and extinction. So that Lamartine was right when he wrote, "Le génie porte en lui un principe de destruction, de mort, de folie, come le fruit porte le ver."*

An American author of great originality and power (Nathaniel Hawthorne) has, in his happy way, expressed the opinion that "the world owes all its onward impulses to men ill at ease;" and this would seem to be something like an echo of the well-known couplet—

"Great wit to madness nearly is allied,
And thin partitions do their bounds divide."

It is equally true, that "men ill at ease" are they who are ripe for antagonistic bearing towards the laws which society sets up for her protection; so that intellectuality would seem to have two strange bed-fellows in insanity and crime. The alliance between the two latter is much more capable of demonstration than that between insanity and "great wit." But we are the rather concerned with the more inviting league, because it is that to which the President's address is directed; and no apology will be necessary for attempting its further elucidation by a reference to the remarkable work of Dr. Moreau, to which we have made previous reference.† In doing so, it will be difficult for me to avoid reproducing ideas which I expressed some years ago in a critique of this Treatise in one of our Quarterly Reviews.

It is an interesting physiological and psychical question of this nature, rather than in the actual treatment of disease, that we feel the importance of that "originating impulse" to which Dr. Maudsley points us. This pregnant theory we can "tickle with the hoe" of inquiry; it will "laugh with the harvest of discovery." There are few of us, I suppose, who are not familiar with individuals known as intellectually gifted, who, if not positively deranged, are yet incapable of preserving an equilibrium, and are not only eccentric, but

* "Lord Houghton, in a well-turned speech at the centenary in honour of Miss Hope Scott, the sole survivor of the line, mentioned the kind of loneliness in which the names of all the great *littérateurs* stand. They have rarely left descendants. We have no Shakspeare, no Milton, no Bacon, no Newton, no Pope, no Byron. Italy has no Danté, no Petrarch, no Ariosto, no Alfieri. Germany has no Göethe, no Schiller, no Heine. France has no Montaigne, no Descartes, no Voltaire, no Lamartine. There is no descendant known of Luther, Calvin, or John Knox. The fact is remarkable, and not favourable to the theory of an indefinite progress of humanity. The race of the very great does not multiply, while the race of the very little—say any Irish hodman [or English curate], is as the sands of the sea."—*Spectator*, Aug. 12, 1871.

† *La Psychologie Morbide dans ses Rapports avec la Philosophie de l'Histoire, ou de l'Influence des Nevropathies sur le Dynamisme Intellectuel.* Par le Docteur J. Moreau (de Tours), Médecin de l'Hospice de Bicêtre.—Paris. 1859.

display striking *bizarrieries* of character. "They are cracked, but the crack lets in the light." The line of demarcation is here most difficult to trace between the phenomena of health and disease; and the conclusions of to-day respecting the mental integrity of such persons are not unfrequently qualified by the doubts and uncertainties of to-morrow. Dr. Conolly made allusion to this class in that earlier work of his which initiated his celebrity as an alienist physician. They are "ill at ease," and constitute a sort of mixture of insanity and power, either the intelligential faculties or the affective dispositions being most disturbed. Thus it is (as Moreau affirms) that "even as the precious metals are only met with enveloped in poor and worthless alloys, so the thoughts and conceptions which attest the greatest energy and the most abundant intellectuality are generated in cerebral organs, where reign likewise confusion and disorder." The importance of keeping under the most watchful control all tendency to "*suractivité*" in these singular and trying temperaments is sufficiently obvious; otherwise, it may be carried beyond a point compatible with the due exercise of the laws of the animal economy, by the development of mania or epilepsy. And thus we have brought before us that marvellous correlation of the extremest conditions of the human mind, and are made familiar at one and the same time with our littleness and our greatness. We are shown a genealogical tree, on which hang side by side the fruit of good and evil, and we are instructed that there is no contradiction in terms in the affirmation that disturbance of the intelligential faculties may become, by the path of seminal transmission, the source of a mental state regarded as essentially antipodal — "*que le délire et le génie ont de communes racines.*"

To such an extent, even, does Moreau carry his views, that he speaks of *Inspiration*—that state in which the intellectual power reaches its zenith, and sheds such brilliancy round the subject of it, that ancient philosophy attributed its origin to Divinity itself—as precisely that condition which presents the greatest analogy to insanity.* If these things are true, a "*mens sana in corpore sano*" is represented by that well-balanced condition which, in the language of the stock ex-

* A great poet, according to Plato, could not compose before feeling himself filled, as it were, with divinity, and *transported out of himself*, without, in fact, *losing his reason*. Great musicians do not compose while they are calm and sedate, but they are carried by a sort of harmonious coercion into a state of "*fureur comme des bacchantes.*" There are numberless facts on record in reference to the eccentricities of great men, showing the necessity of odd and whimsical surroundings, to condition that state of enthusiasm or inspiration

change, is neither above nor below *par*. To rise above or sink below a certain honest standard of mediocrity, is to initiate abnormal processes, which involve one of two issues—intellectuality or insanity. Genius—the *ne plus ultra* of intellectual activity—is the highest expression of nervousness, erethism, irritability, and uneasiness. Thus the deterioration of the material is a condition required for the highest manifestation of the immaterial. The human intelligence is never so near its downfall as when it tests the full measure of its capacity and scales the grandest heights of its ambition. The causes of its precipitation, indeed, are the causes also of its greatness. In numberless respects, Moreau declares, to trace the physiological history of idiots will be to trace that of men of genius, and *vice versa*. Their hereditary antecedents are pregnant with wonderful influences, from which have been generated the realities which walk before us, exciting in turn our sympathy and our admiration. In their ascendants and descendants, in all the extent of the collateral range, nervous affections, insanity of every form, convulsions, diseases of the brain and spinal cord, have abundantly existed. Idiots and members of the “scrofulo-rachitic” family have given evidence of precocious faculties, and of an intelligence beyond their years, until that morbid principle which was its cause, overstepping legitimate limits, broke the mental equilibrium, and shivered the material instrument of its manifestation. No one who has had much experience of life can have failed to notice the coincidence, too well established to be empirical, of bad health, diminished stature, strange habits and gait, peculiar physiognomy, with great genius. In this truth lies the explanation of the fact that in every country the portraits of individual greatness (with a few remarkable exceptions) are the portraits of individual ugliness, while intellectual mediocrity inclines to more æsthetic proportions; as also of the observation so commonly made after gazing upon a strange looking humanity—“that person is either a great fool or a great genius.” And to whichever of these unpromising categories the individual may claim nosological attachment, if you could search his genealogical tree, you would probably find many of its

from whose periodicity they have attained their celebrity. In this category are comprised Haydn, Handel, Mozart, Gluck, Sacchini, Sterne, Donizetti, Schiller, Guido-Reni, &c. These incidents illustrate (as Esquirol expresses it), “cette espèce d’état cataleptique de la pensée,” which isolates the man of genius from his fellow men, and constitutes, “le cachet, le signe pathognomonique des idées fixes.”

roots having their common origin in weakness or in power. This is our "philosophy of history;" this is one of the revelations of morbid psychology, which has so much of truth in it as to make it indeed appalling.

When I first read that part of the presidential address which deals with (2) *The Treatment of Insanity in Asylums and in Private Houses*, I could not help asking myself what had started Dr. Maudsley on the retrograde movement, and what strange revolution was going on in the mental apparatus of one whom I had hitherto regarded as enlightened and progressive. For the last forty years it has been the persistent effort of our legislators, under the co-ordinated stimulus of science and philanthropy (chiefly administered by our own noble profession), to bring under observation the loose and scattered madness of the country, and provide for its subjects fitting homes and refuges. To such an extent and with such success has this been done, that I will venture to say that there is no class of persons in the United Kingdom so well cared for as the insane. The best sites in the counties are selected for their palaces, within which a cubic space per lung is measured for them; an acreage per head is meted out to them in the most fertile districts; a supply of water per head is welled up for them with a profusion which alarms alike the dirty and the clean; the fat kine of our fields are laid under contribution for them; the corn and wine is stored for them; clothing of the warmest and supervision of the best are provided for them. Every sort of indulgence within reasonable bounds is theirs. Though a large number of them are of the most degraded type, and have made themselves what they are by their own vice and wickedness, they are equally (if not altogether wisely) sustained and sheltered. They are rained upon by sympathy and sunshined by kindness. They are fenced about with every sort of protection which the legislature can devise. Magistrates, guardians, commissioners, friends inspect them, visit them, record their grievances, register their scratches, encourage their complaints, tabulate their ailments. Societies are formed to give pecuniary help for legal purposes to those who think they are unlawfully detained. Crazy but free novelists write for them, and for "hard cash," and do their best to mislead the public mind as to the rights and wrongs of lunatics. There is nothing elsewhere approaching the elaborate care which our asylum inmates receive from the hour of their admission to that of their discharge, and yet because they have not the one thing

which they know not how to use—liberty in its largest sense—men are now beginning to encourage the reactionary idea that the mad world is unnecessarily confined; and those, from whom we should have expected better things, are found to talk to their professional brethren about “asylum-made lunatics.” I had thought that a mind schooled in the inductive philosophy would have been more careful how it ventured upon hasty and unsound generalizations, venturing to screen its unorthodoxy under the plea of the liability of a special kind of practice to engender specialism in thought. Surely because a few exceptional cases are occasionally to be met with, where, unfitness for the external world having been predicated, an accidental escape has shown the error of such a judgment, an attack is not to be made upon asylum-treatment, and comparisons instituted injurious to systems and establishments which have been rightly regarded as among the best evidences of humanitarian progress.

Dr. Maudsley ventures to say that *where there are the necessary means* for securing good attendance and proper medical supervision, he thinks that in comparatively few cases is it necessary to send patients to asylums. Yes—*where there are the necessary means*. But how very seldom are the necessary means to be found; and where they are found are they not the desired means by reason of their assimilation to asylum restraint and discipline? The trial and responsibility of an attendant in a private case is infinitely greater than in that of a public one, and the difficulty of meeting with thoroughly trustworthy men is well known. The liability and temptation which lie open to them to abuse their trust are enormous, and aggravated by the trying nature of their duties. My experience of private cases may not be as large as that of many others, but it is sufficient to justify me in the expression of this opinion; and I may add that I have been particularly struck by the sense of relief expressed by attendants joining a public staff, who had previously been occupied in the charge of private cases.* Dr. Wood has hit the mark when he says that asylums form the great means of arresting and restoring insane persons, and it is a mistake to encourage the notion that there is anything horrible about them. Our object

* In a private case which I had under treatment some time ago, where the whole ground floor of a gentleman's country residence was practically converted into an asylum, I had two skilled attendants in charge, under the supervision of a young resident medical man. One of them, of large experience, plausible manner, and irreproachable *written* character, proved himself to be utterly unworthy of confidence, and had to be dismissed at a moment's notice.

should be rather to encourage people to believe that an asylum is a home with nothing that a patient or his friends need dread. Dr. Bucknill does not agree any more than Dr. Wood in thinking that lunatics can be cured out of asylums as well as in them. "I do think" (he says) "that for most cases of insanity the order, the method, the power, the whole of the means which can be brought to bear upon curative efforts in asylums are most valuable; and I should say that if a person were afflicted with acute and recent mania he would have, on the average, a much greater chance of being cured in an asylum than if he were placed under the most scientific treatment out of one."

Dr. Thurnam also brings his experience to bear upon the same side, and wisely makes allusion to the well-known fact that near relations, not being capable of exercising control over the insane, are manifestly unfitted for their care and management.

The removal from home influences is frequently one of the best aids to successful treatment; kindness blended with firmness then take the place of kindness rendered cruel and inefficacious by indiscrimination.

The cases most suited for private treatment are those in which the disease is likely to be of short duration, and where the position and standing of a patient are likely to be seriously compromised by the circumstance of his being sent to an asylum.

So much for the management of acute and curable cases.

There are, I doubt not, patients in every large asylum who are most anxious for their discharge, and who would do well if we could create for them those external surroundings which is specially needed by their peculiar temperaments. But the world is too rough for such, and their sensitive and unadaptive natures resent at once the briars and the thorns. In many cases friends have been so well rid of their troublesome lunatic relations while they have been in the asylum, that they do their utmost, and generally not unsuccessfully, to drive them back again from their *quondam* homes. For this class is needed some sort of probationary institution, such as was recommended by my friend Mr. Hawkins, in a previous number* of this journal—a sort of half-way house between the asylum and the world.

But am I not writing as though I thought and had ex-

* "A Plea for Convalescent Homes in Connection with Asylums for the Insane Poor." By the Rev. Henry Hawkins. "Journal of Mental Science," April, 1871.

perienced that all the inmates of our asylums were desirous of quitting them? Let me disabuse the reader of this impression. There is no necessity to make allusion to that large and hopeless class of demented, which may well make us stand aghast when our optimists chatter about "the dignity of human nature." These eat and drink and perform their natural functions, having no dreams of ambition or of pride, no desire beyond their immediate animal cravings, no consciousness of their miserable degradation. Of those, however, who are capable of appreciating the comforts of life, and of reasoning upon them, I do not find that there are as many who want to leave as who want to stay with us. There are numbers in every asylum who are singularly wise in their generation as to the advantage of being well cared for at the expense of any one but "number one." There are others who are sensible of the advantage of leaving, but are timid and deficient in self-confidence. With few exceptions, those who are most desirous of liberty are those who are least capable of properly using it—malcontents, letter-writers, men and women who are continually thrusting their individualities upon you, clamouring about incarceration, and finding no warmth (as our Thackeray phrases it) either in the kitchen-fire or in the sun. "The routine of an establishment and the dictatorship of an attendant" is what galls them, for their own routine is a constant series of complaints, and they themselves would be the most arbitrary of dictators.

The theory may be "old and bad" (as Dr. Maudsley expresses it), that insanity is "a disease quite out of the category of other diseases;" but it is true to demonstration in spite of anything which may be said to the contrary, by the very weapons with which we are called upon to assail it.

It is much to be feared that in the desire which has lately been manifested by some to increase the liberty of the insane, and treat cases at home, sufficient thought is not given to what is due to society itself. Whether by his own fault, or by circumstances over which he had no control, he who has once given evidence of mental derangement is bound, through his responsible agents, by recognised social obligations to withdraw from the stage for awhile—first, that he may himself recover his equilibrium, and, secondly, that he may not exercise any baneful influence upon the sound members of the community. These obligations are frequently overlooked; and those who support private (home) as against asylum treatment, are, it seems to me, not sufficiently mindful of what is

due to that larger and saner institution called society, of which they are themselves a part. A lunatic may be harmless in the sense of being unaggressive, but he may be anything but harmless in the sense of personal influence and contact with others. His looks, his ways, his grimaces, his recognised unstrung condition, excite a curiosity, or interest, or fear, which cannot fail to be prejudicial to young and sensitive persons of both sexes. Although the most elaborate and costly machinery has been set in motion to bring under proper care and surveillance those who had formerly no screens behind which to hide themselves when they were no longer fitted for public observation, and who were exposed to the jeers of the thoughtless and unfeeling, the latest phase of philanthropy clamours for their periodical release. For some of the incurable as well as the curable cases nothing will now do but immoderate freedom. Our mad folk are to be seen at public amusements, theatres, concerts, churches, sea-side resorts, where they attract the notice of everybody, and disturb the equanimity of many. Surely the sound members of the state have some claim to protection from the unsound members, a large proportion of whom have conditioned their own craziness by the vices and follies from which others have been preserved by self-discipline.

I had intended to offer some few remarks upon the third head of our President's teaching; but I have so far exceeded the limits of that space to which I can have any legitimate claim, that I must defer them to a more convenient season, observing only that even here Dr. Maudsley's movement seems to be rather of the retrograde kind, and at variance with the notions of *early treatment*, which experience has taught us to be so valuable. "Chemical restraint" is, indeed, as bad as physical restraint, and I have before expressed my written opinion that it has been carried in some quarters to what I consider a reprehensible extent. But we cannot yet afford to "throw physic to the dogs" (notably *chloral*), and trust entirely to food, "cubic space," and discipline.

Our Over-crowded Lunatic Asylums. By S. W. D. WILLIAMS, M.D., Medical Superintendent of the Sussex Lunatic Asylum, Haywards Heath.

“Utpote cum jure naturalis omnes liberi nascerentur.”

INSTITUTES OF JUSTINIAN.

We have it on the word of Justinian, that “by the law of nature all men were born free.” Yet the Blue Book of the Commissioners in Lunacy, recently published, shows that 36,871 Englishmen are deprived of their liberty, and confined in lunatic asylums. And if we compare these numbers with those in the Report for 1869 it will be found that during the year 1870 the insane of all classes have increased in number by 2,042, or 174 private and 1,868 pauper patients. This increase is not exceptional, but has been going on for many years.

The consequence is, the large asylums that have been built in nearly every county in England (indeed some counties, as Middlesex, Yorkshire, and Surrey contain two or three monster establishments for the insane poor) are filled to overflowing. And, as will be seen in Appendix C of the Blue Book, which contains a special report of each asylum, they are nearly all thus suffering, and the justices are devising means to meet this difficulty, either by extending their already too large establishments, by refusing admission to recent cases, or building new asylums.

I do not for a moment wish to infer that now-a-days any persons are illegally detained in asylums, but I think that if the mind of the public can be, to use a Carlylism, attempered to the proper point, a more extended trial might be made of discharging harmless and chronic lunatics.

Truly the importance of this question is rapidly becoming imperial. Our already over-taxed ratepayers suffer from the expense entailed on them in building and keeping up such monster establishments, and the poor lunatics suffer in that their comfort and freedom from ill-treatment must be in an inverse ratio to the size of the asylums. Moreover, the asylums themselves lose their proper characteristics as *Curable Hospitals for the Insane*, and rapidly degenerate into vast poor houses for incurables.

The remedy for this state of things is not easily to be found. The boarding-out system, as practised in some parts

of Scotland, has its advocates; but the application to England of this "lay speculation in lunacy," as an able and well-known writer has termed it, is open to many objections. Others, as the authoress of "*Gheel, the City of the Simple*," advocate the plan adopted at Gheel, in Belgium, where a whole peasant population, spread over a large area, have devoted themselves for ages to the care and treatment of the insane. And certainly it is there a great success; but this lunatic colony is the growth of centuries, and who can point out in England a spot where such a plan could be carried through? Some years ago a commencement of such an undertaking was attempted at Haywards Heath, which in those days was isolated enough; but even there, with the advantages of isolation and close proximity to the parent asylum, it had to be abandoned, as the patients were always full of complaints, and all anxious to return to the asylum.

In a recent amendment to the Lunacy Laws it was provided that the guardians might fit up certain wards in the poor houses for chronic and harmless insane, and medical superintendents of asylums were to promote the discharge of such cases to the union houses. But the plan has only partially succeeded, and at the best is of doubtful efficacy. Indeed, in the county of Sussex, it was a complete failure, as I believe every union, with the exception of Brighton, refused to provide the necessary accommodation, naturally objecting to alter the character and spoil the already meagre comfort of their poor houses by the addition of a number of lunatics.

In the county of Sussex an asylum was built about twelve years ago for 450 patients. On three occasions since an enlargement has been necessary, and there are now beds provided for nearly 800 patients. Therefore, at the present rate of increase, in another twelve years something like 1,200 beds would be required; and unfortunately, with our present system, the question appears to admit of no finality. The Commissioners in Lunacy, and all the highest authorities on the subject, are strongly of opinion that for efficient management no asylum should exceed from six to seven hundred patients. Such, also, is decidedly my opinion; and, alarmed at the proportions to which the Sussex asylum is growing, I have for the last eighteen months put in practice a plan which has answered in so far, that whereas the number in the asylum had steadily hitherto increased by about twenty a-year, there are in it at the present moment seven less than

there were last year, notwithstanding that the deaths have been below the average, and the admissions have been much as usual.

It is an unpleasant fact, but nevertheless a true one, that the Lunacy Laws utterly ignore the possibility of the relatives of pauper lunatics having any affection for their afflicted kin. The relations of a pauper lunatic have no voice in the question of sending him to an asylum, and still less in his discharge therefrom.

My experience has strongly impressed me with the fact that, as a rule, the poor are more willing and anxious to have the personal care of their insane relatives than those in a higher station of life. My plan of *partial relief for the over-crowding of our asylums* is founded on this knowledge. Scarcely a week passes by that I am not earnestly solicited, either personally or by letter, that some one or other of the patients under my care may be discharged to the care of his or her relatives. These applications I have encouraged, and have from time to time laid before the Committee of Visitors, who have invariably entertained them favourably, and have in this way discharged many patients, only one of whom has yet returned, and I have not heard that any of those thus discharged have in any way misconducted themselves, so as to be a nuisance to the public. I have, of course, been careful not only to recommend none for discharge in whom there was, as far as I could judge, any homicidal or suicidal tendency, but I have also made all the enquiries in my power as to the respectability of the persons demanding the care of the lunatic, and their fitness for the charge they solicit.

As far as I can judge this scheme admits of even further development than I have as yet attempted. At all events, I do not doubt that, for many years to come, I shall be enabled by its aid to put off any further extension of the asylum, by which means the ratepayers will be relieved of any further burdens, the over-crowding of the asylum, so inimical to its welfare, will be delayed, and the minds of the poor will be eased of one of their great superstitions, viz., that their relatives, when once sent to an asylum, have little if any chance of leaving it alive, the belief of many being that it is to the interest both of the justices and doctors not to discharge the patients.

There is, however, a strong prejudice in the minds of many, especially of the middle and higher classes, against the discharge of lunatics, and one of my objects in writing this short

paper is to deprecate their opposition, and assuage their fears. To me it appears the grossest injustice, that because a father, or husband, or wife, is poor, therefore he is not, if he desires it, to be allowed the charge of his relative afflicted with the most distressing of all maladies, always provided he be fitted for such a charge and will not abuse it.

The old Roman law sets us an example here that we might well follow. In the Law of the Twelve Tables legal curators were provided for the acutely insane (*furiosi*), but no such provision was considered necessary for the chronic insane, imbeciles (*dementes*).

I am aware that my plan has its objections, but though it may be a trite saying, it nevertheless is true, that nothing human is perfect. The only great objection I can see to it is the possibility of the malady of the patient thus discharged suddenly taking on a new phase, and causing him to become dangerous to himself or others. This danger is, however, but small, and should not be allowed for one moment to weigh in the balance against the advantages my scheme affords. No less an authority than John Stuart Mill says "It is not a merely constructive or presumptive injury to others which will justify the interference of law with individual freedom." Surely, if we are to consider this an axiom of political economy, it should apply alike to the insane as the sane. And we should give a man mentally afflicted, even though he be plebeian, every possible chance of "individual freedom" before we consign him for life to a lunatic asylum.

On the Relative Efficacy of Tincture of Hyoscyamus, Bromide of Potassium, and Chloral, in Single Doses, on Maniacal Excitement. By JOHN A. CAMPBELL, M.D., Assistant Medical Superintendent, Garlands Asylum, Carlisle.

(Read at a Meeting of the Members of the Medico-Psychological Association, held in the Royal College of Physicians, Edinburgh, on November 30th, 1871.)

Most asylum physicians admit that in acutely excited cases in whom the ordinary means of inducing sleep, viz., out-door exercise and liberal diet, fail, sleep should be induced by some medical agent, in case the continued excitement may prove too much for the patient, and that in cases of mild melancholia and nervous irritability, where insomnia has been and is the most prominent symptom, that some sleep-causing medicine should be given. As to the medicine, the preparations of opium and the tincture of hyoscyamus long reigned supreme, for some time bromide of potassium was much extolled for its sedative and soporific properties, and latterly chloral has totally eclipsed every other sedative or hypnotic.

Being in the practice of giving some of the excitedly noisy, the restless, and other cases labouring under insomnia, as well as the recent acutely excited cases, some sleep-causing medicine nightly, and having frequently given tincture of hyoscyamus, bromide of potassium, or chloral, I thought that if I gave these three medicines for some time, in the same doses to the same patients, I might form a tolerably accurate idea of their relative efficacy in the following respects:—

1st—Which was the surest sedative to excitement?

2nd—Which was the most certain sleep-producer?

3rd—Which acted most quickly?

4th—What is about the equivalent dose of each?

Of course, having frequently given each of these medicines, I had formed a general opinion of their relative efficacy in all these respects, as most medical men do of medicines that they give frequently.

The method I adopted to arrive at the results I wished for was this. I gave, first, to all the excited, and second, to all the simply sleepless patients, whom I could get to take medicine, on consecutive nights, Tr. hyoscymi, *zii*; potass. bromid., gr. *lx.*; and chloral, gr. *xxx.*, frequently repeating those experiments. I considered that by giving the medicines on alternate nights, if the patient's state changed it would do so for all the medicines, and if any of the medicines had a cumulative tendency it would not show itself. I supplied the night attendant with forms, which he filled in, showing the interval

between taking the medicine and the appearance of any effects, whether sleep resulted, and how long the effects lasted in each case on every occasion.

The following are the cases in which I gave the medicines, and the results I arrived at :—

R. B., a case of mania, very excited, restless, and noisy during most part of the night.

J. B., a case of periodic mania, very much excited.

J. G., a case of chronic mania, much excited.

M. S., a case of periodic mania, much excited.

S. T., a similar case to the last.

A. W., a case of mania, restless and noisy at night.

J. G., chronic mania, restless, constantly talking to himself the most part of each night.

M. B., a case of mania, slightly excited and noisy at night.

M. T., a case of mania, slightly excited and noisy at night.

J. McL., a similar case to the last.

W. J., an advanced case of general paralysis, slightly restless and noisy at night.

Jr. B., a similar case of general paralysis.

J. S., a case of melancholia, with extreme insomnia.

I. P., a case of melancholia, with slight insomnia.

In these 14 cases I gave each of the medicines 46 times. Table I. shows the sex, age, mental state, excitement, number of times the medicines were given, average time before effects were observed, and their average duration in each case.

The total results that I got (each of the medicines having been given 46 times) were, that tincture of hyoscyamus produced sleep on 42 occasions, bromide of potassium on 38, and chloral on 43 occasions.

The average time in which effects were observed with tincture of hyoscyamus was 1 hour and 7 minutes; with bromide of potassium, 1 hour and 15 minutes; and with chloral, 48 minutes.

The average time the effects lasted with tincture of hyoscyamus was 4 hours and 6 minutes, with the bromide 3 hours and 54 minutes, and with chloral 4 hours and 26 minutes.

Thirty grains of chloral produced effects more quickly, sleep more frequently, and its effects lasted longer, than two drachms of tincture of hyoscyamus; and this dose of tincture of hyoscyamus was more powerful in these respects than one drachm of bromide of potassium. Taking the 14 patients, I find that tincture of hyoscyamus always produced sleep in 11, did so only a certain number of times in 2, and not at all in 1. That bromide of potassium did so always in 8, occasionally in 3 and not at all in 3; that chloral produced sleep always in 12, occasionally in 1, and not at all in 1. (*See Table I.*)

TABLE I.

TR. HYOSCYAM 3ii.				POTASS. BROMID. Gr. lx.				CHLORAL GR. xxx.							
Sex.	Age.	Mental State.	Excitement.	No. of times given.	No. of times produced Sleep.	Average time before any effects observed.	Average time effects lasted.	No. of times produced Sleep.	Average time before any effects observed.	Average time effects lasted.					
R. B. . .	46	Mania.	Very Excited.	2	0	hr. m.	hr. m.	0	hr. m.	hr. m.					
J. B. . .	70	Mania.	Very Excited.	2	1	0	0	2	0	4					
J. G. . .	54	Mania.	Very Excited.	3	3	1	1	3	1	4					
M. S. . .	45	Mania.	Very Excited.	4	4	30	40	3	30	20					
S. T. . .	60	Mania.	Very Excited.	4	4	7	40	4	55	2					
A. W. . .	20	Mania.	Very Excited.	4	4	15	30	4	54	5					
J. G. . .	30	Mania.	Slightly Excited.	4	4	10	5	4	1	4					
M. B. . .	30	Mania.	Slightly Excited.	4	4	52	4	3	33	5					
M. T. . .	37	Mania.	Slightly Excited.	3	3	20	5	2	35	4					
J. McL. . .	36	Mania.	Slightly Excited.	3	3	33	40	3	5	6					
W. J. . .	31	General Paralysis.	Slightly Excited.	6	6	45	36	6	50	4					
J. B. . .	42	General Paralysis.	Slightly Excited.	2	2	30	15	2	30	3					
J. S. . .	48	Melancholia.	Great Insomnia.	5	4	30	30	5	18	5					
I. P. . .	41	Melancholia.	Slight Insomnia.	2	2	35	4	2	1	30					
Total No. of times given and sleep produced, and average time before effects appeared, and their duration ...				46	42	1	7	38	1	15	3	54	48	4	26

I then increased the dose of each of the medicines by one half, that is, I gave of tincture of hyoscyamus ziii , of bromide of potassium gr. xc. and of chloral gr. xlv. I only gave this dose to the most excited of the patients, to whom I had given the smaller doses, and to two other cases—one a case of periodic mania, and the other a case of general paralysis, both much excited—in all to 6 cases of mania, 1 of general paralysis, and 1 of melancholia with extreme insomnia. In these 8 cases I gave each of the medicines on 31 occasions. Table II. shows the result in each case. (*See opposite page.*)

The total results that I arrived at (each of the medicines having been given on 31 occasions) are, that tincture of hyoscyamus produced sleep on 24 occasions, bromide of potassium on 18, and chloral on 28 occasions. The average time in which effects were observed with tincture of hyoscyamus was 35 minutes, with bromide of potassium 46 minutes, and chloral 29 minutes. The average time the effects lasted with tincture of hyoscyamus was 3 hours and 39 minutes, with the bromide 3 hours and 31 minutes, and with the chloral 4 hours and 27 minutes.

Chloral in this dose, as in the former, shows its superiority, having produced its effects more quickly, sleep more frequently, and its action continuing longer, than either of the other medicines. Tincture of hyoscyamus retains its place next to chloral. Bromide of potassium did not comparatively cause sleep so often in the larger dose given to the few very excited cases as it did in the smaller dose given to the larger number of less excited cases. I may mention here that in the case of J.S., a patient labouring under melancholia with extreme insomnia, it was more difficult to cause sleep than in patients labouring under a considerable amount of excitement. This patient was perfectly rational and very anxious to sleep soon and soundly, and he told me that he much preferred the tincture of hyoscyamus or chloral to the bromide of potassium. Taking the 8 patients, I find that tincture of hyoscyamus always produced sleep in 3, occasionally in 4, and not at all in 1; that bromide of potassium always produced sleep in 3, occasionally in 3, and not at all in 2. Chloral always produced sleep in 6, occasionally in 1, and not at all in 1.

I then increased the dose to double of that which I had begun with, that is I gave of tincture hyoscyamus 4 drachms, of bromide of potassium 2 drachms, and of chloral 1 drachm. I gave this dose to two cases only—to one of them on five

TABLE II.

	Sex.	Age.	Mental State.	Excitement.	No. of times given.	TR. HYOSCYAM. 3iii.				POTASS. BROMID. Gr. xc.				CHLORAL Gr. xlv.			
						No. of times pro-duced Sleep.	Average time before effects observed.	Average time effects lasted.	No. of times pro-duced Sleep.	Average time before effects observed.	Average time effects lasted.	No. of times pro-duced Sleep.	Average time before effects observed.	Average time effects lasted.	No. of times pro-duced Sleep.	Average time before effects observed.	Average time effects lasted.
R. B. . .	M.	46	Mania.	Very Excited.	2	0	0	0	0	0	0	0	0	0	0	0	0
W. W. . .	M.	60	Mania.	Very Excited.	8	1	3	6	4	1	15	2	40	40	3	40	40
J. G. . .	M.	54	Mania.	Very Excited.	7	5	46	4	5	44	5	48	25	5	14	15	15
H. F. . .	M.	54	General Paralysis.	Very Excited.	4	3	30	4	1	30	4	4	30	5	15	15	15
J. B. . .	M.	70	Mania.	Very Excited.	3	2	17	3	3	33	4	4	32	4	4	4	4
S. T. . .	F.	60	Mania.	Very Excited.	3	3	33	2	3	10	3	40	16	3	40	3	40
M. S. . .	F.	45	Mania.	Very Excited.	2	2	30	3	2	35	1	1	20	3	15	3	15
J. S. . .	M.	48	Melancholia.	Great Insomnia.	2	1	30	1	0	0	0	0	30	6	20	6	20
Total No. of times given and sleep produced, and average time before effects appeared and lasted . . .					31	24	35	3	18	46	3	31	29	4	27	4	27

occasions, to the other on one. Firstly, R. B., a case of mania, very excited at night, on whom the smaller doses had had no effect, got each of the medicines on five occasions. Tincture of hyoscyamus caused sleep three times; its effects were observed in an average time of an hour and a quarter, and lasted 7 hours. Bromide of potassium produced no observable effects on any occasion. Chloral caused sleep each time: its effects were observed in an average time of 30 minutes, and lasted 7 hours. Secondly, J. G., a case of mania in a state of very great excitement, got each of the medicines once. Tincture of hyoscyamus caused sleep; its effects were observed in an hour and lasted 7 hours. Bromide of potassium had no perceptible effect. Chloral caused sleep; its effects were noticed in 44 minutes and lasted 4 hours.

In this dose again chloral produced sleep more frequently and more quickly than tincture of hyoscyamus. The bromide proved utterly inefficacious, where so much excitement existed.

In only one case and only on one occasion have I seen a patient sick after the administration of any of these medicines; that was after a drachm of chloral in one ounce of water, and in all probability the sickness was caused by the medicine not being sufficiently diluted. I noticed no bad effects of any other kind follow their administration. I find that in these patients, all of whom were in fair condition, except the general paralytics, neither age nor sex seemed much to influence the effects of the medicines. It was simply the existing excitement or insomnia that had any such influence. In great excitement a large dose of tincture of hyoscyamus or of chloral may not act for a considerable time and yet ultimately act strongly.

The results of these experiments, which, from their limited number, must not be regarded conclusive, are—

1st.—That both chloral and tincture of hyoscyamus are sure sedatives to maniacal excitement.

2nd.—That of these two medicines chloral is the most certain sleep-producer.

3rd.—That chloral acts more quickly than tincture of hyoscyamus.

4th.—That though bromide of potassium in such doses is a sedative to maniacal excitement and to a certain extent an hypnotic, yet it is not a sufficiently powerful sedative to allay intense excitement, or an hypnotic to compel sleep where great insomnia exists.

5th.—That a two-drachm dose of tincture of hyoscyamus is not quite equivalent to thirty grains of chloral. Two-and-a-half drachms would probably be as nearly an equivalent as could be given. From the different sedative and soporific power of bromide of potassium, I think one can hardly form an idea of an equivalent dose. It appears to me to be useful only where the excitement or insomnia is of a slight character.

Mental Epidemics among the Lower Animals. By W. LAUDER LINDSAY, M.D., F.R.S.E., Physician to the Murray Royal Institution (for the Insane), Perth.

In supplement of my paper on “The *Physiology** of Mind in the Lower Animals,” and in anticipation of the correlative essay, which I hope by-and-bye to contribute to the “Journal of Mental Science,” on “The *Pathology*† of Mind in the Lower Animals,” I am desirous—so long as the whole British public has a vivid memory of certain signal illustrations of the fact, or phenomena—to direct attention to the circumstance that the lower animals, in common with man, are subject to certain forms of *Epidemic Mental Derangement*. I allude more especially, at present, to that form thereof which is popularly known as *Panic*, and technically described as *Timoria* or *Pan-phobia*; an affection that is very properly included among “Epidemic Mental Diseases” in the short account given of them by Dr. Browne, ex-Commissioner in Lunacy for Scotland, in “Chambers’s Encyclopædia” (vol. iv, 1862, p. 92).‡ The illustrations to which I would specially draw attention, in the case of the lower animals, are to be found, on the one hand, in the notorious *Stampedes*§ of *Cavalry Horses*, which character-

* “Journal of Mental Science,” April, 1871.

† The whole subject of both “The *Physiology* and *Pathology* of Mind in the Lower Animals,” has been *outlined* by the author in a pamphlet bearing that title, published in Edinburgh in May, 1871.

‡ He there cites, as illustrative examples, the *Panics* of the year 1845, and the descriptions given of them in the “Edinburgh Review” for 1849.

§ *Stampede* is apparently a Mexican (Spanish) word. Miss Isabella Saxon, in her “Five Years within the Golden Gate” (California), describes the following incident as occurring near Council Bluffs, on the overland route from Chicago to San Francisco, 1868 (p. 280):—“We had here what the travellers call a *Stampede*; or the bullocks unharnessed taking flight and scampering off in all directions, often knocking down or trampling upon all in their way. It required much trouble on these occasions, and even considerable *danger*, to recover them.”

ized the well-known "autumn manœuvres" at Aldershot, about the end of August and beginning of September, 1871, as well as the later military manœuvres near the Russian capital (in September, 1871); and on the other hand, the *Stampedes of other domestic and wild animals*, during the more recent devastating conflagrations of Chicago, and of the prairies or forests of Michigan and Wisconsin, (in October, 1871.)

Besides illustrating the phenomena of *Panic* among the lower animals, and its similarity to that which frequently occurs in man, such "stampedes" furnish admirable examples of various prominent and valuable *mental endowments* of these animals; acquirements or powers which have been already described or touched upon in my previous paper, but which cannot be too frequently or fully illustrated or demonstrated so long as popular opinion in reference to their mental attainments may be held to be represented by such a prejudiced expression of belief as that contained in the criticism on Darwin's "Descent of Man" in the "Quarterly Review" for July last. Moreover, it is advisable to cite the most *recent* examples or illustrations—those which most easily admit of *authentication*; because authors, who hold that *other* animals are separated from man by a different *kind* of mind, or by the absence of all mind in the former, take objection to telling anecdotes that teach lessons *opposed* to their prejudiced views, on the ground that such illustrations are apocryphal, and unworthy of serious or implicit belief. Now the newspaper accounts of the *English* stampedes, to which I have referred, may not be accurate in *all* their details; but they are probably sufficiently so for practical or present purposes. The panics in question were the subject of description, at the time of their occurrence, by the "special correspondents" of the leading newspapers of the metropolis—men whose experience renders them eminently capable of accurate observation, and of faithful narrative—whose reports, had they been erroneous, would have met with angry criticism or immediate denial at the hands of sensitive military authorities. The same remarks apply—though not in equal degree—to the *Russian* stampede, which was described by the "Times" correspondent, writing from the spot; and it need not be here explained that the "Times" does not employ as its correspondents men who are not skilled observers in or reporters on the various subjects on which they write with such signal attractiveness and fidelity to fact. The "special correspondents" of the New York newspapers are perhaps

more given to what is known as "sensational" writing than are their brethren of the press in London; in other words, they clothe their *facts* in a more highly figurative language. But they are not inferior to their London representatives in the keenness of their observative powers, nor in the fidelity of their records. Their statements regarding the great fire of Chicago, and the prairie or bush fires of Michigan and Wisconsin, have moreover been amply confirmed by the reports of the special correspondents of *our own* newspapers;* and, what is quite as important testimony to their truthfulness, the very various reports of very different writers agree—in their main features—as to the essential or fundamental *facts*. And lastly, the incidents described, alike in England, Russia, and the United States, are of so *recent* occurrence that the veracity and fidelity of the reports in question admit of *easy authentication*. I need, therefore, I think, offer no apology for placing upon record here a brief narrative of these most recent and at present well-remembered "stampedes" of the horse and other animals; appending a commentary, setting forth the parallelisms to similar "panics" in man, and the interesting illustrations such animal panics afford of certain mental traits of the lower animals.

I. *Stampedes of Cavalry Horses—traceable to Alarm or Fright.*

A. *The Aldershot Stampedes.*

The three stampedes at Aldershot respectively occurred on Monday, Aug. 30; Saturday, Sept. 2; and Sunday, Sept. 3, 1871; all at night, the horses belonging to three different regiments.

The *first* stampede happened among the horses of the 1st Life Guards, encamped on Cove Common near Aldershot for the purpose of taking part in the so-called "Autumn Manœuvres" of our Volunteer Forces. It formed the subject of narrative and comment in all the newspapers of the three kingdoms about the beginning of Sept. 1871. It was also the subject of a plate and relative narrative in the "Graphic," of September 16, 1871. The "Times" gave the following account of the details:—

Three hundred horses have been put in danger of life and limb; . . .

* The correspondent of the "Scotsman" (Oct. 27, 1871), writes as regards the *American* descriptions of the Chicago fire—"As to *exaggerations*. . . there were *none*. There *could be none*: not one-tenth of the story has been told, and he doubted if ever it would be. . . Who will ever hear the *true* tale of this dire calamity?"

a large number of them have been irretrievably lamed, others drowned, others staked, and others so crippled that they must be *shot*; . . . and altogether a loss, which may be moderately estimated at £2000, has been suffered by the nation. . . . Who could have thought that horses would go *mad*, like Goldsmith's dog, to gain some "private end" of their own? and yet what *other* conclusion can we form from the story? . . . a sedate and virtuous body of 300 horses suddenly going *mad*, running over one another, kicking and fighting among themselves, and committing *suicide* by all the means in their power, because they were disturbed by an ill-bred cur or a flock of geese! . . . The 300 horses, which had been feeding like one, became *frenzied* with the same unity of purpose. They started back from their pickets, rearing and snorting, and some gave way. Where they did not, the horses rushed forwards again, cannoning against one another, and the rocking pull on the cords brought up more pins, and those which were still tethered became more *frantic*, until, in a moment or two, the whole 300 broke loose. . . . The 300, directed by as much intelligent discrimination as the 600 who charged the Russian guns at Balaclava, started off on an equally fatal course.

The "Daily Telegraph," of September 1, 1871, ascribed the origin of the panic to the quarreling of two dogs in the camp. The smaller one, being bitten by the larger. Setting up a hideous yell, ran towards the horses. The sudden noise *frightened* the horses of two officers, and caused them to start from their pickets, followed by six troop horses. A *panic* then seized the whole line; the 300 broke loose *simultaneously*, running in all directions, some dragging the cords and pins, and all wearing their saddle-cloths. . . . Almost every open route had been taken by the fugitives. . . . At one point the troop dashed against the closed toll-gate, and smashed it to pieces, while . . . many plunged against stakes, or other obstructions, seriously injuring themselves. Several dropped down dead within an hour; some were drowned in the canal, and others were captured in a crippled state.

The "Standard" wrote—

It has been found necessary to *destroy* ten or twelve of these valuable animals, owing to the injuries sustained in their *mad* career. About twenty have been lamed and otherwise rendered unfit for service. Several are still missing; and most of those which have been brought back to camp are on the sick list. . . . During their stampede, they plunged against stakes or other obstructions, which penetrated their breasts, and otherwise inflicted serious injury. Several horses dropped dead within an hour. . . . In addition to the horses already dead or crippled, many others will have to be sold as unfit for service.

The "Edinburgh Evening Courant," of September 1, 1871, narrates that the horses "took *fright*, and broke loose. They

galloped off in all directions, and passed through Farnham, Farnborough, and Framley. About 20 galloped into the encampment of the 1st Battalion of the Rifle Brigade, where they came in contact with a cab, which they knocked over, and greatly injured the proprietor." Next morning it was found "that about ten were killed and 26 missing,—many others being wounded."

The *second* stampede, which occurred to 80 horses of the 2nd Dragoon Guards, also encamped on Cove Common, is the subject of a plate and of sundry comments in the "Illustrated London News" (of September 16, 1871. Pp. 256 and 262).

According to the "Daily News" of September 4, 1871—

Seventy-six horses suddenly broke loose from the right wing of the regiment, and galloped *madly* in all directions. The vast expanse of common ground in the locality is intersected by the Basingstoke canal and numerous ditches, into which many of the animals plunged, or fell, and were rescued with difficulty from drowning or suffocation. . . . A charger belonging to Captain Greatorex had an eye cut out; while another broke its leg so severely that the bone protruded through the skin, and it was obliged to be *shot*. . . . Four were so seriously injured that it was feared they would have to be *shot*, and others were badly lacerated in various places.

The "Daily Telegraph" of same date, also states—"Several of them received injuries which necessitated their being *shot*."

The *third* stampede—according to the "Globe," of September 6, 1871—occurred in the same camp to the horses of the 10th Hussars—on a smaller scale, however, than the others—only 40 horses being engaged in it.

The *immediate or exciting cause* of the panic in all these stampedes appears to have been some very trivial incident—in itself utterly disproportionate to the effect produced. Some say the first stampede was caused by a flock of geese "that disturbed the repose of the chargers;" the second was attributed to "a runaway horse from an adjacent camp." "The horses were startled either by a flock of geese or by some dogs quarreling . . . a sudden panic being produced," says the "Graphic" (September 16, 1871). "It is always one or two horses which begin the mischief; and if *they* were quieted at once the *contagion of panic* would be arrested," remarks the special correspondent of the "Scotsman" (Sept. 6, 1871).

Such facts illustrate the extreme *nervous sensibility, excitability, or irritability** of artificially-reared horses; their

* Using these terms here in their strictly *scientific* sense.

capability of being very easily *startled or frightened*. These aptitudes must be considered, however, in connection with the *remote or predisposing causes* of such panics, which are to be found in the *artificiality* and *luxury* of their mode of life and in the whole character of their training and occupation.* The life of the English cavalry horse is an eminently luxurious and lazy one; the animal is utterly unaccustomed to the sounds and sights of country or of camp routine. Luxurious life is as destructive of nervous vigour or tone in the lower animals as in man. Commenting on the first stampede, the "Daily Telegraph" (of September 2, 1871) says—

It was one of Lord Macaulay's favourite paradoxes that *hyper-civilisation* tends rapidly to worse barbarism than that of nature; and he especially insisted on the deteriorating and corrupting influence of *city* life upon the brute creation. The horse, for instance, which is free from vice in his wild state, and which, when but one stage removed from nature, rapidly becomes the trusting *friend* of his Arab master, is too often converted by civilisation into a shift, y, and sometimes into an *incurably vicious*, animal.

Sir Charles Napier often told us that we, Englishmen, did not understand how to domesticate the horse. He is an infinitely more intelligent companion to man than we give him credit for being. Our American kinsmen understand and manage him better than we do. Nothing is more common than to see an American horse left standing by his master in the midst of Broadway, alone and untied; and all the noise and traffic of one of the most crowded thoroughfares in the world will not "scare" him, or make him budge till his owner comes to claim him. . . . Horses may be *made* to understand, and sympathise with, the wishes and occupations of their masters; and Professor Rarey only carried to its ideal perfection a lesson that may be learned from many an intelligent student of the stable in every class of English life. We may enforce what might be called "the conscious *sense of discipline*" in the horse, and render it "too sagacious to be scared by a sudden noise!"

The same newspaper (of April 12, 1871) remarks, also, that "horses, though docile and gentle, are *timid and nervous*. Noise and violence will only aggravate their *terror* if once aroused; but they can be soothed if a man has the sense and temper to go about his task in the right way."

* See what I have said on nervous sensibility in the horse and dog, as the result of high breeding, in my pamphlet on "The Physiology and Pathology of Mind in the Lower Animals" (p. 13 and 14); as well as in my paper on "Insanity in the Lower Animals" (reprinted from the "British and Foreign Medico-Chirurgical Review" for July, 1871, p. 11).

Commenting on the Aldershot stampedes, the "Times" writes—

Horses are strangely *nervous* creatures. If a stable take fire it is almost impossible to get the poor beasts to move out of it, though they *scream* in the *agony of their terror*; and if a number of horses are seized with a *panic*, they become quite *mad* for the time. Some of those which first ran away were found stupidly swimming round and round in a tank. Others dashed their heads so violently against the bank of a ditch that their spines were literally driven backwards.

The special correspondent of the "Scotsman" (September 6, 1871), writing from Aldershot of the several stampedes, says—"All the horses are ridiculously over-fed, and in much too good condition for *real* work."

The *English* stampedes attracted general notice from the circumstances under which they occurred. The manœuvres, with which they were connected, formed an experiment of national importance, to which the attention of all classes of people was specially directed; and the various camps contained representatives—in the form of "special correspondents"—of all the leading newspapers in the three kingdoms, whose object it was to record *pro bono publico* all the incidents and accidents of the experiment. There is, however, no *novelty* in the sudden seizure with *panic* of a body of horse.* Cases of other "stampedes" in cavalry horses, in the Crimean and other wars, were given by a Military Veterinary Surgeon in the "Scotsman" (in September, 1871), showing that such *panics* are by no means uncommon among trained bodies of horse.

B. The St. Petersburg Stampede.

That the *English* stampedes are not singular instances of panics among cavalry horses is proved by the fact that a more remarkable illustration, on a much larger scale, occurred even more recently (in October, 1871) in Russia—in the course of a similar series of autumnal manœuvres near St. Petersburg. Describing these recent military manœuvres in the neighbourhood of St. Petersburg, the "Times" correspondent writes (says the "Edinburgh Daily Review," of October 17, 1871)

On the second night of the campaign an unlucky accident occurred.
 A regiment of the Empress' Cuirassiers of the Guard,

* The "North British Agriculturist," of October 18, 1871, contains an article on "*Panics amongst Horses*."

900 strong, had arrived at their cantonments
 A neighbouring regiment, which had arrived long before, and had dined, indulged in some *boisterous mirth*; whereupon the squadron of horses nearest to them became *alarmed*, broke away, was followed by the next squadron, and a *panic* seizing them all, *in one instant* the whole 900 fled in wild disorder, and in the utmost *terror*, over the open country. Two things were very remarkable in this stampede. In the first place, exactly as all wild horses do in the Steppes—and from which Steppes many of these had come—and exactly as camels do before they start in the desert, they unanimously selected one large powerful horse as their *leader*;* and with a look at him and a snort at him, which they meant and he understood as *après vous*, they actually waited till he dashed to the front, and then followed in wild confusion. When I tell you that some of these horses were not recovered till they had gone 120 miles into Finland, you may imagine what the *panic* was. Some of the more *young* and adventurous *mad-caps* did not stop, or were not caught, till they had run about 100 miles. Some were staked, and some were lamed, and some were obliged to be *shot*.

A curious circumstance happened in the middle of the stampede, illustrating the wonderful power of *habit and discipline* in the conduct of the horse, even when panic-struck—

The second remarkable thing is the way that some of them were stopped. In *one solid mass* they dashed on for miles, and then came directly, at right angles, on a river. In front of them was a bridge, but on the other side of the bridge was a sort of *tête du pont*, and a small picket of cavalry. The horse which *led* would not face the bridge, seeing the cavalry at the other end; but turned on one side, dashed into the stream, and the whole 900 horses swam the river *together*. As they emerged and flew wildly on, the commander of the picket bethought him of a *ruse*, and ordered a bugler to blow the *appel*. This is always blown when the horses are going to be *fed* *All the old horses* pricked their ears, *wavered*, stopped, *paused*, turned round, and trotted back!† This severed the mass. . . . The rest were broken up. 300 ran into a large enclosure on a farm."

In this most interesting *Russian* stampede it is noteworthy that (1) the horses were not picketed at all, such was the confidence of their riders in their docility and discipline; and

* The reader may compare with this narrative Byron's description, in "*Ma-zeppe*," of the evolutions of a "troop," or "squadron," of *wild* horses—

"*Headed by one black mighty steed,
 Who seemed the patriarch of his breed.*"

† With this incident may be compared one that happened during some of the fiercer battles near Metz—in the course of the recent Franco-Prussian War—in which many of the Prussian cavalry had been slain. When the evening muster-call of a certain Prussian cavalry regiment (1st Dragoon Guards) was sounded, over 600 riderless horses came in answer to the familiar summons.

that (2), in the height of their panic, the terror-stricken horses showed "a *method* in their madness," in so far as they were able to appoint and to follow a *leader*, as well as to move in *one orderly mass* with a single will and aim. The effect of the *appel* on the *old* chargers will be variously explained. Some will attribute it, as a mere mechanical result, to the force of association, of habit and discipline. But their behaviour is capable of being accounted for also on higher grounds. It is at least a fact that sober *reflection and reason* would have led to a similar result in man; for it would have taught him to expect both food and protection, rest and comfort, instead of the hunger-struck, shelterless, weather-beaten condition of the hopeless exile. Moreover, *hesitancy* or indecision implies consideration; which again involves reflection and reasoning in the balancing of advantages and disadvantages, probabilities or eventualities.

In *all* these cavalry stampedes—Russian as well as English—the *apparent simultaneity* of the panic, in a whole troop, squadron, or larger body, of horse, is of interest. *Apparent simultaneity*, I repeat, because when the phenomena of the panic are analysed there is found to be a rapid succession of attacks, instead of a really coincident or cotemporaneous affection. These panics are usually described as having developed themselves at the same moment in scores or hundreds of animals. But probably in *all* cases one or two animals are first startled and become panic-stricken, and their alarm communicates itself *by sympathy* to the others; so rapidly, however, that *practically* it may be described as a simultaneous affection, and it may really appear to be so to their riders, who, taken by surprise, are themselves thrown into a sort of panic by the sudden and unexpected disappearance of their horses, and who are not in a position calmly to observe or analyse the sequence of phenomena. Thus, in the account of the Russian stampede, it is in one place asserted that "*in one instant*" 900 horses fled. But this is a mere figure of speech, not to be construed too literally; for in another part of the same narrative, the origin and *gradual* growth of the panic is fully and correctly described. It has to be observed, also, that in all panics—equally among other animals and in man—*imagination* must exert a powerful influence in exaggerating, or in creating ideas of, *danger*.

I have been much struck, in reading the accounts of these stampedes, by the frequency with which disabled animals are summarily disposed of by *shooting*. This, indeed, seems

the usual treatment of all domestic animals when they threaten to prove unserviceable for man's selfish purposes! Assuming that such a procedure is desirable in cases where further suitability for man's purposes can be *proved* no longer to exist, there can be no doubt that, by the summary process of shooting, large numbers of animals are rashly and inhumanly destroyed that would, if permitted to survive, continue to prove useful to their ignorant masters; and this for two reasons at least, viz., that, on the one hand, the *diagnosis* of affections that are supposed to threaten, not only uselessness, but sometimes positive danger, to man, is faulty in the extreme; while, on the other, our domestic animals do not get the benefit of that "conservative surgery" or that "expectant medicine" which at present characterise the treatment of *human* disorders. There can be no doubt, for instance, that countless valuable dogs are slaughtered ruthlessly merely because they are *supposed* to have bitten human beings, and are, on that account alone, *reputed* to be rabietic. Whereas, at least in the majority of such cases, the animals may be proved to have bitten—usually under sufficient provocation; but they cannot be shown to be rabietic, or it can be conclusively proven that they are *non-rabietic*! * There seems to be something grossly inhuman in condemning to an ignominious death—just when old age or accident abates the full vigour of life and renders them less useful than heretofore—the poor dog that has for years been a man's closest *companion* and most trusted *friend*, or that has been the loved and affectionate *playfellow* of his children; or the good horse that has, perhaps for even a longer period, been his tried and faithful *servant*, and borne him in all sorts of peril! It is difficult to understand—when we bear in mind how much they have in common in their feelings and their general mental endowments—on what principle it is that such a marvellous difference is made in the treatment of man, and of the domestic animals that are so intimately associated with him.† There is no good reason why we should not have, for the lower animals, the same kind of provision for old age or infirmity, accident or disease, that exist so plentifully for the *human* beings that are so frequently greatly their inferiors! Why should we not have, for instance, (1) homes or refuges

* See what I have said on this subject in a paper on "Madness in Animals," "Journal of Mental Science," July, 1871, p. 187.

† See also what I have said on this subject in my pamphlet on "The Physiology and Pathology of Mind in the Lower Animals," p. 18.

for stray animals; (2) asylums for the aged and infirm; (3) hospitals for the treatment of accidents and disease; (4) schools for the moral or mental—as well as for the physical—training of the young? On the contrary, the strongest arguments might be adduced—based on the community of mental endowment between man and the lower animals—for the establishment of such institutions; of which it is to be earnestly hoped the Brown Pathological Institute, now being established in London,* will be but the forerunner. Such institutions—for the care or treatment of the lower animals in age, accident, or disease—are by no means unknown in other countries if they are rare or practically unknown in our own; nor are they of *modern* growth. Thus there is at least one “*Dogs’ Home*” in London; and there are, I believe, institutions of a similar kind in New York and one or two other American cities. An ancestor of the present Prince of Wales, who died in the year 948, made strict *laws* for the protection of *cats*. And Daubenton† describes a *Cat Hospital* as in operation at Damascus more than a century and a half ago, supported by public contributions—the fruit, like many another admirable charity, of religious superstition.

II. *Stampedes—attributable to fear or terror—of Domestic or Wild Animals during extensive Conflagrations.*

A. *The Great Fire of Chicago in October, 1871.*

It is of importance here to note (1) that the same influences—*terror and despair*—affected, at the same time and in the same way, *man and other animals*; and (2) that the effect of the *same cause*—the alarm created by the sudden and extensive conflagration—was *different in different individuals*, equally in man and among the lower animals.

Fright or alarm on the one hand, and *fear or terror* on the

* The “Daily Telegraph,” of Novem. 21, 1871, announces that “The Brown Institution,” in Wandsworth Road, Vauxhall, S.W., will be opened on December 1, 1871, for the reception of sick and injured animals. The announcement states further that the Institution is under the government of the University of London; that it is intended for studying and endeavouring to cure the maladies and injuries of quadrupeds and birds useful to man; that this is to be without charge beyond the immediate expenses—the owner defraying simply the cost of maintenance of each animal under treatment; and that a resident veterinary surgeon will attend daily—Sundays excepted.

† Churchill’s *Voyages*, vol. i, 1704.

other, frequently produce not only different but opposite effects; both groups of results, however, being equally disastrous. While the former causes of mental disorder most generally lead to violent and dangerous *action*, to excessive *stimulation* of certain faculties such as *imagination*, the latter are apt to *paralyse* the power equally of action and of thought—a stupid and fatal *inertia and inaction* being the result. Thus, in “The Field” (of September 23, 1871), a correspondent describes a group of partridges as so frightened by a stoat that they were seen *running* and screaming “in a state of great agitation.” Here the animal was rendered incapable of using its wings for flight; and similar cases in birds, as well as in many other animals, of inability to make use of their limbs in seeking safety by flight from a dreaded enemy, are by no means uncommon. For instance, the rattlesnakes (*Crotalidæ*) possess the power of instantly depriving of all faculty of motion or volition birds, squirrels, and hares, rendering them truly *panic-stricken*, helplessly awaiting their death-blow from their formidable and relentless enemy.*

Amidst the burning of Chicago “Horses rushed like *maniacs* through the streets,” says the “Glasgow Weekly Mail,” of October 28, 1871. “One splendid team, attached to a coach, ran over the Van Buren Street Bridge, which had been charred and weakened. Just as the *mad* horses had passed the centre it gave way, and they plunged down through the lurid glare into the scarlet river below.” “Horses, *mad with fury*, rushed through the burning streets,” says “The Scotsman,” of Oct. 27, 1871. “Animals burst forth from keeping, and rushed *blindly* among the flames, adding to the terror of the scene, as they gave forth their *cries* of dread,” says the “New York Herald,” of Oct. 10, 1871. “Hundreds of horses and cows have been burned in stables; and on the north side numbers of animals, though released from confinement, were so *bewildered and confused* by the sea of fire which surrounded them that they rushed wildly to and fro,† uttering *cries* of fright and pain, until scorched and killed” (“New York Times,” Oct. 11, 1871).

On the other hand, cartmen and draymen “Strove the utmost to save their horses. But, in cases of fire, horses seem to lose all the instinct which, under ordinary circumstances, would

* Dr. Baird: “Cyclopædia of the Natural Sciences.”

† Schreyer paints a picture of horses trying to escape from a burning stable, where they are represented as “in passionate, if not delirious, movement.”

save them from danger, and stand *stock-still* in their stables, their flanks and sides shaking in the *agony of terror*, and utterly refuse to be taken or driven from their stables, which, poor beasts! they have always considered their place of safety, where no harm can reach them. On this awful night, above even the roar of the flames and the crash of falling timbers, could be heard the *shricks* of the horses ringing out on the night air. They would not be driven away; but, *stupefied with fear*, fell down in their stables, and were roasted alive" ("New York World," Oct. 11, 1871).

Contrasting now the condition of the panic-stricken *human* inhabitants of the burning city with that of the horses and cattle, as above described, we are told that: "The stampede was sickening beyond the power of words to tell. *Men and horses* were jammed on the bridge, women and children clinging alike to each other, and the most precious of their household effects. Some of them, with the clothes nearly torn from their bodies, ran *blindly about*, swearing and moaning." The fire "had driven the inhabitants into Lake and South Water Streets, and on to the bridges, *much as a prairie fire stampedes affrighted animals!* The streets were filled with a *distracted* people, panic-stricken. An overwhelming sense of catastrophe, beyond the power of man to arrest, robbed this surging riot of wretches of the usual petty consideration of life. Those who were strongest and most cowardly knocked the others down in their delirium. Men, women, and children were trampled upon by human herds that fled *without reason* hither and thither, uttering the most pitiful *groans and cries of distress*" ("Edinburgh Evening Courant," Oct. 24, 1871). "Can it be wondered at that the people became, as it were, *demented* and desperate? The people had become *demoralised* they had lost all of their *temper and control*, and were *practically incapable of caring for themselves*. Pandemonium set in. The respectable portion of the people were *bewildered and stupefied*." They "*became mad from despair*. a crowd of men and women reasoning, as it were, *without reason*." "Panic pervaded the entire population" (writes the correspondent of the "Scotsman," Oct. 27, 1871). "It seems singular, yet all experience shows it to be true, that, in times of great disaster, men are not chastened; but the *worst* part of their natures is roused to action. They become *moral maniacs*" ("New York World," Oct. 11, 1871).

*B. Prairie and Bush Fires of Michigan and Wisconsin, in October, 1871.**

"A squatter will tell you that, on some never-to-be-forgotten night, he was called out of bed by the *frantic* lowing of his cattle. On going out he found the atmosphere heated as if by a furnace, the sky ablaze with a lurid reflection, and the whole horizon thick with smoke. The cattle broke loose, and rushed to the nearest water. Herds of buffaloes, deer, and all the wild creatures of the prairies, dashed along in a *frantic* chase to escape the coming horror, or fell down exhausted to become the prey of the irresistible flames. One or two horsemen spurred on their steeds to a race with death. He saw the flames gaining ground; his horse on the point of sinking under the influence of heat, fatigue, and *terror*. A few days afterwards, when the flames had been extinguished he found here and there the charred remains of buffaloes, tame cattle, horses and men" ("Daily Telegraph," of Oct. 25, 1871). During the Wisconsin bush fires,* "bears and other wild beasts have been driven in *dismay* from the woods and are flying about in every direction" ("New York Herald," Oct. 5, 1871).

During the burning of the town of Peshtigo, "in many cases the men became *deranged*, and gave up in *despair*; and sooner than be roasted alive *deliberately committed suicide* with knives and other weapons Of their intense agony no tongue can tell nor words describe" ("New York Tribune," Oct. 19, 1871).

It is important to observe that the very various writers, who describe the stampedes of panic-stricken animals, agree in ascribing their behaviour to *madness*.† Now these correspondents of the press are probably neither physicians nor veterinarians, metaphysicians nor psychologists. They have no scientific nor philosophical *bias*; though they are not likely to be free from *popular* prejudice on such a subject as "Mind in the Lower Animals." They take, therefore, simply a common-sense view of the question in describing the phenomena

* A Stampede of man and domestic animals, during "A forest fire in America," forms the subject of a plate and relative description in the "Illustrated London News," of Oct. 28, 1871, p. 410.

† I have myself had experience of a "Bush" (that is a *forest*) fire, while travelling in New Zealand, in the district of Coromandel, North Island, in January, 1862.

‡ Thus paragraphs in the American newspapers, describing the burning of Chicago, are headed "*Maddened Horses in the Fire*" and "*Bands of Drunken Maniacs*."

of *panic* both in man and other animals as assignable to *madness*. Their testimony is spontaneous, and in all probability *unwilling*, and is the more valuable on this account. *Unwilling*, because were it pointed out that the application of the term *madness* to the lower animals implies the existence in them of a *mind* similar to that of man, capable of disorder by the same influences that produce *insanity* in him, the majority, at least, of the "special correspondents" in question would probably withdraw the term *madness*, and substitute *frenzy*, *fury*, or *franticness*, or any similar term, which, in their opinion, might not commit them to the heterodox admission that animals possess *mind*, or that their mind, if they *must* be allowed to possess one of some sort, is of the *nature* of that which has hitherto been supposed pre-eminently to distinguish man! But, whatever the term employed to describe the phenomena of *panic*, there can be no doubt, on the one hand, that they cannot, by any ingenuity in the perversion of facts, be ascribed to *rabies*, *distemper*, or other specific disease with which veterinarians are in the habit—most erroneously—of invariably associating *madness*; while, on the other, both the origin and cause of the affection show it to be purely emotional or *mental*. In short *panic*, as above described—equally in England, Russia, and the United States—can only be regarded as an *epidemic, temporary, acute form of Insanity*. There is a strict analogy between the panics above described and the "stampedes" of disheartened armies—as illustrated for instance during the recent civil war in America: or to the panics of the occupants of crowded theatres, churches, or steamboats, on the cry of fire being suddenly and unexpectedly raised. There is the same sudden *startling*; the same rapid *communication of alarm by sympathy*; the same headlong, heedless, precipitate rush, "anywhere, anywhere"—too frequently and literally—"out of the world!"

The general phenomena and the disastrous results of *panics* in man, and in other animals, are unquestionably the same in all their essentials. In both cases there is the same sudden change, perversion, or loss of natural character.* Presence of mind, courage, self-control, cautiousness, prudence, circumspection, firmness; the power of calm reflection and deliberation, of avoiding perils, of calculating the consequences of proposed acts, of anticipating the effect which given action

* Some of the phenomena and effects of such change of the natural character are pointed out in my pamphlet on "The Physiology and Pathology of Mind in the Lower Animals," p. 11.

will produce, are all lost; the instincts of self-preservation and love of life, of hunger and thirst, are abrogated; there is no designed or definite purpose, no discriminating will; a morbid *imagination* inordinately magnifies danger; terror is *expressed* by heart-rending cries or screams; man and animal alike flee blindly from dangers that are frequently imaginary into those that are very real—rushing into self-destruction of the most self-torturing kind; or they die sometimes from sheer physical exhaustion, sometimes from excessive emotion.

Some authors describe this self-destruction as *suicide*: an unfortunate term, however, which involves the element of *design or deliberation*, and, according to many legal writers, from Blackstone downwards, also the presence of “a sound mind.” *Self-destruction* in such cases is, so far at least, analogous to that of the young salmon, whose migratory instinct causes it, at certain seasons, to leap out of the fresh water, and to commit—what Darwin speaks of as—“*unintentional suicide*.”* A somewhat similar phenomenon occurs in the common swallow. At the migration-period its habits change (*e.g.*, it becomes restless and noisy). A migratory bird, if caged at this period, will beat its chest against its bars till the skin is denuded; and it is probable that the excitement of the *ungratified* instinct is, under such circumstances, a frequent cause of *death* †—directly or indirectly—just as it is also a most likely cause of *insanity*.

But the migratory instinct, when gratified, sometimes leads, apparently, to quite as disastrous results,‡ and on a larger scale. At least, Dr. Baird, of the British Museum,§ a competent authority, in describing the periodical migrations, in bands, of the Scandinavian Lemming (*Myodes Norvegicus*), says—“Nor do they stop till they reach the sea, where *thousands are drowned*.” “The Treasury of Literature” (for Novem., 1871) says of these Lemming-migrations: “*Thousands are often found dead: and their bodies have been known to infect the air for miles, creating malignant disorders, which very widely and rapidly spread. . . . It is said that ultimately their processional excursion ends in cannibalism: for*

* “Descent of Man,” vol. i, p. 83.

† Darwin’s “Descent of Man,” vol. i, p. 83.

‡ During the autumnal migration of partridges from the north of Scotland, in 1871, it is stated by the “Elgin Courant,” of Novem. 3, 1871, that “Several benighted birds, probably attracted by the gas lights, were found dead in the streets” of the city of Aberdeen.

§ And Fellow of the Linnean Society; in his “Cyclopædia of the Natural Sciences,” 1861.

they eat each other. This is explained by their coming to the sea, which all do not attempt to cross; and having devoured all herbage they will not turn back, but quarrel and fight; and perhaps, in the extremity of their hunger, they do eat each other to some extent. Whenever the progress is interrupted nothing stops them. Impelled by *some strange power*, they go straight over or through it." Thus, it is stated, they will "boldly plunge" into any *fire* that bars their *straight* line of march. "If a house stops their course and they cannot get *through* it, they will continue in front *till they die*!" "Chambers's Encyclopædia" (vol. vi, 1864, article on the "Migrations of Animals"), says: "The most remarkable instance is that of the Lemmings; which, *at no definite epochs*, but generally once or twice in a quarter of a century, traverse Nordland and Finmark in vast hosts, ending their career in the Western Ocean, into which they enter and come to a *suicidal* end; or, taking a direction through Swedish Lapland, are drowned in the Gulf of Bothnia." These migrations have been supposed to arise from want of food; but this theory is untenable, for they do not migrate in famine times, nor do they go to places where food is more abundant or more suitable. Even if such a theory explained the migrations, it would not account for the wholesale *self-destruction* of the animals. Whether the latter is accidental or deliberate—intentional or unintentional *suicide*—there is no evidence to prove. But the act can be accounted for on the supposition of the existence of blind *morbid impulse*, or of *panic*, however caused. "The reason of the migration itself," adds Dr. Baird, "is not well understood."* The whole circumstances, however, render it probable that such phenomena should be relegated to the category of *epidemic mental disorders*.

An illustration of a panic in cattle, arising from causes different from any of those already described, is to be found in

* According to "Chambers's Encyclopædia" (vol. vi, 1864, p. 448), the *cause* of the migration of *other* animals is not, at present, understood. Thus the wanderings of the African *Spring-bok* are not explicable on the usually assigned theory of the causes of animal migrations, viz.: (1) search for food or water; (2) for a position in which to spawn or breed, under a reproductive impulse or instinct; (3) or for a warmer temperature. The difficulties of accounting for some of the migrations of birds are stated by Sir Wm. Jardine in his and Jesse's edition of "White's Selbourne" (1851, p. 87). In the same work, White himself remarks (pp. 130-1): "There are doubtless *many* home internal migrations within this kingdom that want to be better understood. Witness these vast flocks of *hen* chaffinches that appear with us in the winter without hardly any cocks among them. I see every winter vast flights of *hen* chaffinches, but none of cocks."

the irritation produced by "the act of oviposition" in the Bot-fly (*Æstrus Bovis*). "It appears," says Dr. Baird, "to be attended with either severe suffering, or great *apprehension*; as, when attacked by this fly, cattle become perfectly *furious*. *Terror and agitation* seem to affect the *whole herd*. The unfortunate *individual first attacked* flies bellowing from the rest of the flock; . . . while the remainder, in a state of wild *affright*, follow in its rear, and chase round the whole meadow with headlong speed." Here again we see the effect of *sympathy* on the one hand, and of *imitation* and imagination on the other. Panics among *sheep* are both common, apparently, and frequently disastrous. Youatt, in his work on the Sheep (1856, foot note, p. 29, quoting from the "Annual Register" of 1808), gives an instance in which 123 sheep were lost out of a flock of 800, near Guildford, Surrey. Being *frightened* by a dog, one jumped over a hedge down a steep incline, and was killed, the others following helter-skelter and tumbling the one upon the other with such rapidity that adjustment or extrication was impossible. In lambs there is sometimes a delirium or mania, referable to phrenitis, which has an *epidemic* character. Thus Youatt relates (foot note, p. 395, quoting from "Lawrence on Cattle," p. 632), that in one case in Suffolk "a number of the lambs ran skipping up to the top of the roof" (of a barn) "as if they were possessed by a thousand demons.* The whole parish wisely concluded they were bewitched, and a wretched and aged pauper became the object of their suspicion and deadly hatred. The senseless and horrible supposed prevention of witchcraft was resorted to, namely, *burning* one of the poor animals *alive!*"

I cannot at present cite further illustrations. But I have little doubt that he, who will take the trouble to *seek for* further examples of panics, or other forms of *epidemic mental disorder*,† among the lower animals, both wild and domesticated, will have no difficulty in finding them. For instance, parallel phenomena must occur when a wolf suddenly introduces itself among a flock of sheep, or a fox unexpectedly pounces into the midst of a flock of geese, or of barn-yard fowls. And, moreover, panics of this kind can

* With this instance of *demoniacal possession* may be compared that of the swine mentioned in Scripture (Luke viii, 33; Mark v, 13; Matthew viii, 32).

† It is somewhat singular, that, in no recent treatise on Insanity—so far as I remember—is there any section on *epidemic* mental disorders, even in man! In such works, for instance, as those of Bucknill and Tuke, Maudsley, or Blandford, the word *epidemic* does not occur at all in their indices or tables of contents.

easily be *produced artificially*, and their phenomena studied and analysed at leisure. They are of course producible most readily in animals that are naturally *timid* and easily startled or frightened, such as sheep or hares, squirrels, certain horses and dogs, and many birds and lizards. Various even of the lowest animals show, moreover, in a marked way, the sometimes singular results of *alarm*. Thus, the lobster, "when suddenly alarmed by a loud noise, such as a peal of thunder, or the report of a cannon . . . shoots (throws off) his claws immediately."*

A Medico-Legal Possibility. By FREDERICK NEEDHAM, M.D.

In a certain section of the public mind the impression seems somehow to have taken root that in a well-regulated asylum no accident can ever occur without affording evidence of want of care and forethought on the part of the responsible officers.

So far has this absurd feeling been carried that, within a recent period, a writer, professedly possessed of the requisite knowledge for his task, has been at the trouble of suggesting that when any patient dies from the effect of a certain class of accident the attendants in charge shall be subjected to the terrors of the law before they have been proved guilty of any offence, or in the absence of such proof; and that in default a victim shall be offered up on the altar of public opinion in the person of the unoffending medical superintendent.

It is needless to say that statements such as these carry with them their own condemnation. But it yet seems important that a record should be kept of such accidents, occurring from time to time in our practice, as suggest medico-legal possibilities, involving grave consequences to the credit of an asylum.

The investigations which have already been made into the condition of the bones in general paralysis tends to the belief that they are much more fragile in that disease than in health, or other forms of mental disease. An accumulation of facts upon this point will materially affect the question of death from apparent violence in such cases.

So, too, recorded instances of unusual accidents, not caused by, but at first sight attributable to, violence, will demonstrate two facts of considerable interest and importance to all those who are connected with asylum management—firstly, that the Superintendent of an asylum is at all times surrounded

* Dr. Baird, "Cyclopædia of the Natural Sciences."

by the possibility of temporary loss of credit from circumstances over which he can exercise not an atom of control, and that he is, therefore, entitled to a just and discriminating criticism; and, secondly, that attendants upon the insane, while they are neither much better nor much worse than other people, are by no means such murderous and cruelty-loving brutes as sensation-coloured pictures have too often portrayed them.

Some weeks since an accident occurred in this asylum which suggested the foregoing remarks.

I was standing at the door of one of the airing courts talking to a patient, when I observed a male epileptic, who was taking exercise, suddenly fall, face downwards, upon the grass. He uttered no cry either before or during the fit which now ensued, but fell to the ground as if lightning-struck. He was, of course, at once attended to. His mouth and nose were bleeding freely; otherwise he appeared to have sustained no injury. In half an hour the attendant asked me to visit him again, as the bleeding still continued; and on examination, I found that the patient had fractured his lower jaw in two places.

Now, suppose this accident had occurred in a large court, thickly planted, or that from any cause the patient's fall had been overlooked for a few moments, and death ensued, what a very ugly combination of circumstances would have occurred; sufficient to justify a coroner's jury in a verdict of death from violence—to wit, a murderous blow on the face.

The facts that several competent persons, to whom I have mentioned the case, have recognised this possibility, and that no case of the kind has, so far as I am aware, been placed on record, must be my apology for the present communication.

Case of Ataxic Aphasia and Agraphia, with Locomotor Ataxia.

By J. BATTY TUKE, M.D., F.R.C.P., and JOHN FRASER, M.B.

W. F. C., aged 46, married, formerly engine driver, subsequently a time-keeper and publican, said to have been insane eight or nine months; assigned cause, excessive drinking; stated to be suicidal and dangerous to others; with no hereditary predisposition to insanity; was admitted to Fife and Kinross District Asylum on the 30th Sept., 1871.

It has been ascertained that this patient has been a drunkard all his life. In the year 1850 he was attacked by fits, which, from the description given, were epileptic. They commenced suddenly, were preluded by a sigh, the convulsions

were considerable, the tongue was bitten, froth came from the mouth, and the coma was profound. At the commencement of the attack they occurred as often as seven times daily, but they soon became less frequent and disappeared twelvemonths after their first onset.

During the twenty intervening years, W. F. C. has not relaxed his dissipated habits, whisky being his chief drink. When intoxicated he was violent under opposition; at times, however, this violence seems to have exceeded mere alcoholic excitement, and to have reached the extent of alcoholic mania, for when in this condition, he would smash and destroy everything about him, and was exceedingly dangerous to himself and others. These attacks lasted for about an hour. As an instance of their violence, it may be cited that on one occasion he smashed every window in the house of the manager of a railway company in whose employment he was at the time.

These attacks were subsequent to the epilepsy. He had also one attack of delirium tremens without maniacal excitement. During the winter of 1870-71 this patient was subject to what he called rheumatic pains, affecting his legs only. He described them to his wife as "prinkling and starting," causing him to kick whenever they attacked him. He believed them due to rheumatism, as he was at that time exposed to wet and cold as a time-keeper at a coal pit. He was in good health until the last week of January, his locomotor powers were unimpaired, for he danced a whole night at a wedding a few days prior to this date, his speech and capability of writing were untouched, and his sight good. Early in the week alluded to he became very quiet and morose, evinced disinclination to work, and complained of a peculiar sensation, not actually amounting to pain, in his head. By the end of the week the quietness had increased to listlessness, apathy, and stupor. One morning, nine days after the commencement of this attack, he, while in bed, became suddenly worse. There was no unconsciousness, but he could not speak, only mumble, and the power of the right arm was almost gone. The vision, immediately after this, was affected, for the patient, when trying to catch hold of an object, always put his hand beyond it or to its side. This seems to have been diplopia, for he by signs explained to his wife that he saw double. One of the signs was the holding up of two of his fingers when asked what was the matter with his sight. He was confined to bed for six weeks. When he left it, it was found he was slightly paralysed of the right leg; further, that something more than paralysis was evident with

regard to both legs, inasmuch as his gait was what it now is, stumbling and unsteady. The right arm, in the course of a few months, regained its power, and the right leg lost its halt.

Condition on Admission.—This patient was a man of above average height, well developed, and of good muscularity, pleasant expression; head bald from below occiput to forehead; hair at sides grizzled black; left pupil slightly larger than right.

Physical examination of internal organs revealed nothing abnormal; pulse 88, of good strength; temperature of axilla 98.2; urine sp. gr. 1010, acid reaction, slight trace of phosphates.

After the application of all the differential tests, the diagnosis of locomotor ataxia was arrived at. The following were the most characteristic phenomena:—1st, unimpaired muscular power when in horizontal position; 2nd, swaying to and fro when standing erect, increased considerably on application of Romberg's test; 3rd, a staggering, straddling gait, greatly exaggerated when attempting to keep to a chalked line; 4th, the almost loss of equilibrium when turning round, and complete loss when eyes were closed; 5th, he had the usual paroxysmal neuralgic pains in lower extremities, causing involuntary jerking. On enquiring into his sensations when walking, sitting, micturating, and defecating, the patient was understood to indicate that there was something abnormal in the first three, but could not illustrate by simile the peculiarity of the sensation of each, owing to his speech affection; he signified, however, that defecation was natural.

The sensibility of the skin of the legs was tested by an interrupted current of electricity, and was found much impaired. The right leg was more affected than the left, the anæsthesia increased from above downwards, and was greater on the outer and anterior aspects than on the inner and posterior. The dorsa and soles of the feet were almost completely anæsthetic. There were, however, localized spots at which the sensibility was intact; these were posterior to the left external and internal malleoli, anterior to right external malleolus, and a circumscribed tract of the size of a crown piece in the centre of the soles of the feet; the skin circumjacent to these spots was insensible to the strongest current, but directly the sponges touched the sensitive localities, the patient cried out and swore. The weakest current was felt on either side of spinal column throughout its whole length. The left arm was more sensitive than the right.

The tactile sensibility of the legs, as tested by æsthesiometer, was almost lost; the points could not be distinguished as two when separated to the extent of four inches. The tongue was also found deficient: in this respect, the limit of confusion was from three-eighths to half an inch. The sensibility to temperature was in no place deficient.

Owing to the imperfection of speech, it was difficult to obtain verbal evidence as to diplopia, but it was noticed that when he endeavoured to introduce a pen into an ink-bottle, he touched a spot many inches beyond it. On the visiting physician carrying his finger in a semi-circle in front of the eyes at the distance of a foot, the patient lost sight of it when half way between the nose and the ear, on the right side. The ophthalmoscope did not reveal any morbid condition.

On conversation being attempted, it was at once observed that articulation was imperfect. He could enunciate simple expressions of affirmation or negation, and common words like "good," "fine," "cold," "canna," "John," and a few simple oaths. The longest phrase he ever employed was "sure as death." Even these were unsatisfactorily articulated, being produced by a jerking spasmodic effort. With a very few more exceptions the loss of articulation was complete, any further attempt to speak ended in mumbling, accompanied by descriptive gesticulation; for instance, when asked what was his trade (an engine-driver), after an endeavour to get out the word, he imitated the noise of an engine starting. If shown a book, a watch, or any common object, and asked to designate it, it was evident that a mental effort was being made to comply, inasmuch as he thought a moment or two, and then made a futile attempt at articulation. For the purpose of endeavouring to analyse the halt, the question was asked whether he knew what he was looking at; he nodded assent, and indicated by signs that he knew what it was, and when further asked if he knew its name, he also assented. The effort at articulation consisted of slight clonic spasms of the muscles of the jaw at inspiration; when inspiration was at its height, he suddenly let out his breath, shook his head impatiently, as much as to say that he could not do it, signified annoyance, and jerked out the word "canna." When asked if it was a book, his face brightened up and gave tokens of assent, but when asked to repeat the word, he again failed, and no *amount of prompting could enable him to pronounce it*. There were a few words which he could at times partially articulate when directed to do so; one of these was "watch," of which he could say "wa," repeating it over and over again, but if prompted at

this stage, he immediately pronounced the whole word; if not prompted, the attempt consisted of the partial utterance.

A curious phenomenon sometimes occurred when he was endeavouring to articulate; at the end of the effort, instead of the utterance of the word desired, one would escape him which had no relation to it; for instance, on trying to say "book," he jerked out "John," immediately, however, indicating he was aware of the mistake. (John is the name of his son.) When asked to count, he could occasionally get as far as "seven," never further; but when immediately after he was directed to say the word "one," he failed. It was noted that his limited vocabulary was more at his command when in company of the attendants, than when he was addressed by the medical officers or strangers. But, if at any time he was asked to repeat the simple word or phrase, which he had voluntarily uttered a minute before, he was unable to do so.

When C.'s power of writing was tested, it was found he could sign his name (Couper) fairly, but when he was asked to write any words of his own choosing, he invariably repeated his signature, and when told not to select his name, he did not even attempt to write. He refused to try to write down certain words distinctly spoken to him. There were others to which he would apply himself; but the invariable result was a *mélange* of the letters of his name. He soon relinquished the effort, uttering his customary phrase, "canna." He appeared to exert himself considerably to produce the word "Mary" (his wife's name), but after a few moments' consideration, he said it was "clean gone." When appealed to for the cause of this absence of power, whether he could not get his fingers to form the letters, had forgotten how to write, or had forgotten the word, the answer was unsatisfactory, owing to his aphasia, but the impression was that he desired to indicate that he had forgotten how to write. When asked to copy the written word "broth," he got on correctly as far as "bro," which he followed up by "u;" when his mistake was indicated, he recommenced by writing the letter "c." The import of this observation will be discussed hereafter.

He was never observed to read, though he could do so previous to his illness. He stated that he *could not* now read. On a small printed Bible being handed him upside down, he turned it to the correct position. When asked to read, he made the attempt, but indicated it was beyond his power, on account of some confusion of vision. He named correctly two or three letters which were pointed out to him, but mis-called others without recognising the error.

Whatever his acts may have been prior to his admission to the asylum, no definite symptoms of insanity were developed during his residence. He fully appreciated everything that was said to him, and his expression was indicative of a considerable degree of intelligence. As far as he could, he assisted the attendants, and only on one occasion did he exhibit any violence of temper.

It seems hard to say that the only indication suggestive of mental weakness was extreme contentedness, somewhat approaching the *bien etre* of the general paralysis of the insane. He was extremely unwilling to leave the institution, and pointing to his legs, said, "No right." But as after a residence of six weeks no mental aberration of a character warranting his detention had presented itself, we were reluctantly compelled to discharge him on trial. The only treatment adopted was the daily application of the interrupted current, from which he derived undoubted benefit.

Commentary.—The object of bringing this case before your notice is the rarity of the combination of so many ataxic forms of disease in one individual, their apparent common cause, the great similarity of each with each, and their possible common pathology.

Twenty years ago this man was the subject of a temporary attack of alcoholic epilepsy, and habits of intemperance having been persevered in, culminated in the hemiplegic attack of last January. It is of interest to note the supervention of the symptoms of six various groups of nervous disease, viz., epilepsy, delirium tremens, hemiplegia, aphasia, locomotor ataxia, and maniacal excitement on one common cause, and further, that the toxic influence has left unimpaired all the tissues of the body except the nervous.

Unlike all other reported cases of locomotor ataxia, the development of the disease in this instance was rapid, it might be even said sudden, for with the exception of the premonitory pains, all its definite indications presented themselves within a period of six weeks; and it must be particularly observed that it is more than probable that they were actually cotemporaneous with the hemiplegia and aphasia, for diplopia, a very frequent concomitant of locomotor ataxia, was observed to exist immediately after the paralytic seizure. The fact that the man was for six weeks confined to bed precluded the observation of the locomotor symptoms, which, however, were prominent on his first attempt at walking, complicated with paresis of the right leg.

We are led to the conclusion that the lesion causing the

hemiplegia was of a limited sanguineous nature, as it was unaccompanied by coma, was transitory in its duration, and as the loss of power was not complete. These conditions suggest that the clot was in the left corpus striatum.

The manifestations of aphasia and agraphia in the patient were most suggestively similar to the phenomena of locomotor ataxia. Walking, articulation, and writing are the result of fine co-ordination of muscles. All authorities agree that the phenomena of locomotor ataxia are due to the want of co-ordination, and we believe that a slight consideration will prove that in this case the aphasia resulted from the same want. He was able to indicate by signs that he appreciated the idea connected with an object; that he knew the word proper to designate it; his voice was intact; he made efforts to employ it, but was unable to adapt the mechanism for the formation of articulate sounds. These efforts, which resulted either in total or partial failure, as shown by mumbling, or the enunciation of half a prompted word, the irregular contractions of the muscles of the cheeks and lips, and the anæsthesia of the tongue, are so closely allied to the symptoms of locomotor ataxia as to force the diagnosis of ataxic aphasia. The phenomena of agraphia were somewhat more complex. The results of his efforts to write were pretty good, imperfect, and futile;—pretty good, inasmuch as that he could write his first Christian name and surname so that they could be read;—imperfect, in that he could not form consecutively the letters of any other word, invariably producing confusedly the component letters of his surname;—and absent, in that he was unable to write words spoken, spelt, or placed before him to copy, or, as in the instance of his second Christian name, his inability was shown by a mere scribble. He always shaped to write, and appeared to bring his will to bear upon the process, but the halting point was always when the mechanical part of the act was to be put in operation. Another interesting fact may be cited, showing deficiency in the finer powers of manipulation, namely, the inability to button his shirt, and his fumbling at the larger buttons.

These facts compel us to the conclusion that the agraphia, like the aphasia, was ataxic in its nature.

Is it pressing the point too far to ask whether the diplopia is not a result of an ataxic condition of the muscles of the eye?

The fact that a few common words and familiar phrases and that his name was imperfectly written, in short, that automatic action occasionally asserted itself, far from invalidating the diagnosis of ataxic aphasia and agraphia, goes to

strengthen it; as it has been frequently observed that walking, when performed unobserved and unconsciously, that is automatically by the ataxic patient, especially in the early stage of the disease, presents the characteristic manifestations in a much less marked degree. The automaticity of the enunciation of the few words uttered by this patient is proved by the fact that he could not reiterate them when asked to do so. Perhaps the automaticity of his writing is best shown by the specimen now laid before you. He was asked to copy the word "Broth," he wrote "Bro" quite correctly, automatic action then asserted itself, for instinctively "u" followed the "o" as in his own surname "Couper," and when corrected and directed to continue writing, a capital "C," the initial of his name, was produced.

Having, we trust, proved that in this case the three muscular acquirements, walking, speaking, and writing, were similarly affected, the proposition naturally arises, can the pathology of each be the same? The morbid condition of one of these diseases, locomotor ataxia, is well known, namely, degeneration of the posterior columns and atrophy of the posterior nerves in the dorso-lumbar region of the spinal cord. When this case of ataxic aphasia is concluded, would we not be justified in anticipating the discovery of a similar degeneration in the structure of the roots or tracts of the sensory nerves concerned in articulation? The ataxic agraphia can be accounted for by the extension of the spinal disease; we have the authority of Niemeyer for stating that its symptoms are occasionally observed in the upper extremities; even without this, the phenomena of this case would go strongly towards the support of this hypothesis.

How far does the history of this case support this theoretical pathology? We have evidence that this patient's nervous system was peculiarly the subject of disease, consequent upon chronic alcoholic poisoning. The onset of the diseases now under consideration was subacutely sudden, the following sequence of symptoms being developed within nine days—peculiar feelings in head, semi-melancholia, stupor, mania, hemiplegia and the three ataxies.

This concatenation almost implies some cerebral softening, for they are not sufficient in their intensity to account for cerebral inflammatory action. This softening produced a hemorrhage which, as we have suggested, was most probably in the left corpus striatum, and the cause of the hemiplegia. It will be remembered that the premonitory

neuralgic pains of locomotor ataxia had been present prior to this attack, though no more definite symptoms of the disease had presented themselves, and we believe the sudden manifestation of all the characteristics was due to the irritation of the nervous system consequent upon the presence of the clot. If there was, as we have suggested, disease at the roots of the sensory nerves of articulation, as latent as that of the cord, may it not be presumed that the same irritation developed the ataxic aphasia?

Aphasia is a generic term, having at present two species—aphasia amnesica and aphasia ataxica. Many differences separate these two, perhaps too many, for out of them may be differentiated other species and endless varieties, if differences are to be the sole basis of classification. Seeing that loss of memory of words and the absence of that fine muscular co-ordination necessary for articulation are so widely different physiologically, are we not bound to expect that pathological investigation will reveal lesions different in nature and in seat?

PART II.—REVIEWS.

Neuralgia and the Diseases that Resemble it. By FRANCIS E. ANSTIE, M.D. Macmillan and Co. 1871.

This book meets a want in the medical literature of this country; it is almost as interesting as it is instructive, and we recommend it confidently as a valuable treatise, containing much original observation and thought. Every one who is interested in the study and treatment of nervous diseases ought certainly to possess it. The article by Dr. Anstie, on the “Hereditary Connection of Nervous Diseases,” which we publish in this number of the Journal, renders it unnecessary to enter into so full a review of its contents as we should otherwise have done; for the views put forward in the article are founded on observations recorded in the book, and will serve to give our readers a just idea of its excellent quality.

The work consists of two parts: the first part dealing with the clinical history of neuralgia, its complications, its pathology and etiology, its diagnosis, prognosis, and treatment; the second part treating of the diseases that resemble neuralgia—myalgia, spinal irritation, the pains of hypochondriasis, the pains of locomotor ataxy, the pains of cerebral abscess, the pains of alcoholism, the pains of syphilis, the pains of latent gout, colic, and other pains of peripheral

irritation, and dyspeptic headache. This enumeration of the contents will show with what thoroughness and completeness the author has endeavoured to treat his subject. And yet it occurred to us, while reading through the contents, that another chapter might perhaps have been added with advantage, namely, a chapter on pain itself, describing the diversities of pain to which human flesh is liable, and the meaning, symptomatic and pathological, of different pains, so far as they have any. There are many kinds of pain—burning, aching, boring, throbbing, shooting, and other pains; and we have long thought that a chapter on the different sorts of pain with which it is the lot of mankind to be tormented, and their meanings, by a competent writer like Dr. Anstie, would be a useful addition to medical literature. Such a chapter would not, perhaps, be thought to come rightly within the plan of his book, but we throw out the suggestion for consideration when he sets to work, as he will no doubt soon have to do, to prepare a second edition.

It is true that Dr. Anstie does make some introductory remarks on pain in general, but they are directed only to show that the functional state of the nerves which is felt as pain, is not an exaltation of the ordinary function of sensation, not really a *hyperæsthesia*, but something which, if not the exact opposite of this, is nearly so. He sums up the considerations adduced in these propositions:—

1. Pain is not a true hyperæsthesia; on the contrary, it involves a lowering of true function. (But does not acute hyperæsthesia similarly involve a lowering of true function?)
2. Pain is due to a perturbation of nerve force, originating in dynamic disturbance either within or without the nervous system.
3. The susceptibility to this perturbation is great in proportion to the physical imperfection of the nervous tissue, *until* this imperfection reaches to the extent of cutting off nervous communications (paralysis).

While sympathising with the general tenour of these introductory remarks, there is one statement to which we must take some objection. It is this—"The tactile perceptions are, no doubt, conveyed by an independent set of fibres from those which convey the sense of pain." Is this a proposition which is so certain as to admit of no doubt? It certainly is not a consequence flowing necessarily from the fact that there is a *bluntness* of the tactile perceptions in parts which are acutely painful; and for our part we fail to find any

satisfactory evidence in support of the opinion. In regard of two such different sensations, there are two suppositions which lie ready to hand—either that different nerve fibres are concerned in them, or that the same nerve fibres are concerned in different modes or kinds of action, in consequence of very different impressions made upon them. Of the two suppositions we think the latter the more probable; believing that the specific character of the tactile sense is due, not to anything specific in the nerve fibres, which are mere conductors, but to the specific arrangements at their peripheral ends for the reception of special impressions. Remove these by removing a piece of skin, the only impression the nerve fibres will convey will be one that will be felt as pain. Even the motor and sensory nerve fibres do not differ essentially in their neurility; their differences of function are due to their different central and terminal connexions, so that they will, as experiment proves, take on each other's conducting functions when a divided sensory is united to a divided motor nerve. The fact that there is a bluntness of perception in parts which are acutely painful, we should claim as actual evidence in support of the opinion that the same nerve fibres serve to conduct the impressions of touch and of pain.

Of the first and second chapters, in which the clinical history of neuralgia and its complications are treated of, we can say no more here than that they are full, eminently suggestive, and contain many striking and original observations. Dr. Anstie has had the advantage *quoad* science, the disadvantage *quoad* himself, of the opportunity of making clinical observations on his own person, for it appears that he is sometimes a sufferer from neuralgia of the opthalmic division of the fifth. Speaking of the change of colour in the hair which sometimes accompanies and follows supraorbital neuralgia, he says—

When pain attacks me severely, the hair of the eyebrow on the affected side displays a very distinct patch of grey (on some occasions it has been quite *white*) opposite the issue of the supraorbital nerve, and the same hairs (which can be easily identified) return almost to their natural colour when I am free from neuralgia. I must, however, add the very curious fact which I observed accidentally in experimenting (as regards urinary elimination) on the effects of large doses of alcohol, that a dose sufficiently large to produce uncomfortably narcotic effects, invariably caused the same temporary change of colour in the hair of the same eyebrow, when no decided pain was produced, but only general malaise.

He goes on to mention a fact which might, perhaps, be of interest to Mr. Darwin :—

Occasionally the individual hairs near the distribution of the painful nerve become coarsely hypertrophied ; at times the number of hairs appear to multiply, but I imagine this is only a case of more rapid and exuberant development of hairs that would be otherwise weak and small. In one very remarkable instance of sciatica this came under my observation, the whole front of the painful part, from the knee nearly to the ankle, became clothed, in the course of about six months, with a dense fell of hair, which strongly reminded me of similar hair-growths that have been occasionally seen in connection with traumatic injuries to the spinal cord. More commonly the effect of neuralgia upon hair is to make it brittle, and to cause it to fall out in considerable quantities.

Another observation regarding the effect of neuralgia on the nutrition of the skin, has a similar interest :—

A certain coarseness of texture of the skin has struck me much in several cases of long-standing facial neuralgia. And there is a most curious phenomenon—the distribution of a greater or less amount of dark *pigment* in the skin near the painful part. This phenomenon is much more marked during the paroxysms, and in the slighter cases entirely disappears in the intervals, but in old-standing severe cases it becomes more or less permanent.

It is an interesting fact that the constant galvanic current, in relieving facial neuralgia, not unfrequently *disperses*, almost instantaneously, the *brown skin-pigment* that has collected in the painful region. For other remarkable instances of the influence of neuralgia upon the nutrition of tissues we must refer our readers to the book itself ; they will nowhere else find so full and systematic an account of such effects.

The third chapter, which deals with the pathology and etiology of neuralgia, is perhaps the most important chapter in the book. Dr. Anstie lays stress upon the position of neuralgia as a *hereditary neurosis*, and has brought forward a large number of cases into the histories of which he made careful enquiries. They certainly supply a body of valuable evidence, such as will not be found elsewhere. The history of one family, through four generations, he has traced in a way, which, if it were more frequently followed, would soon lead to the substitution of a mass of most useful facts for the vague statements and conjectures which are all that now do duty for knowledge. Next to the influence of neurotic inheritance, he believes that there is no such frequently power-

ful factor in the formation of the neuralgic habit as mental warp of a certain kind, the product of an unwise education. There are certain motional, and spiritual, and intellectual grooves, into which it is too common and only too easy to direct the minds of young children, and which conduct them too often to a condition of general nervous weakness, and not unfrequently to the special miseries of neuralgia.

I believe that a most unfortunate, a positively poisonous influence on the nervous system, especially in youth, is the direct result of efforts, dictated often by the highest motives, to train the emotions and aspirations to a high ideal, especially to a high religious ideal. It is not the object that is bad, but the machinery by which it is sought to be attained—by compelling the mind to a perpetual introspection directed to the object of discovering whether it comes up to a self-directed spiritual standard. . . . The lessons which our psychologists are rapidly learning as to the evil effects on the brain of an education that promotes *self consciousness* are sorely needed to be applied to the pathology of nervous diseases generally, and of neuralgia among the rest. Common sense and common humanity, when united with the physician's knowledge, cry out against the system under which religious parents and teachers subject the feeble and highly mobile nervous systems of the young to the tremendous strain of spiritual self-questioning upon the most momentous topics. More especially is such a practice to be condemned in the case of boys and girls who are passing through the ordeal of sexual development; an epoch which, as we have already seen, is peculiarly favourable to the formation of the neurotic habit; and I must emphatically state my belief that among the seriously minded English middle classes, whose life is necessarily colourless and monotonous, the mischief thus worked is both grave and widely spread.

With respect to the pathology of neuralgia, we may say briefly that Dr. Anstie holds the essential morbid condition to be in the nervous centre with which the sensory nerve is connected. He argues that neuralgics are, save in exceptional instances, *persons with congenitally weak spots in the nervous centres*, which break down into degeneration temporary or permanent, under the strain imposed by one or other of the physiological crises of the organism, or the special physical or psychical circumstances which surround the patient's life. What, then, is the character of the morbid change in the nerve root? He believes that it is, in the majority of cases, an interstitial atrophy, tending either to recovery or to the gradual establishment of grey degeneration or yellow atrophy. While thinking this view vouched for by strong evidence, he

says, "I claim for it that the whole argument shall be taken together, for it is a case of cumulative proof; every link must be weighed and tested before the remarkable strength of the chain can be felt." The reader must go to the book for the exposition of the argument, which he will find to be stronger in the number of reasons pointing to the conclusion than Dr. Anstie's unfortunate comparison of them to the links of a chain might imply. For, in truth, the strength of a chain is not cumulative; it is not increased by the number of links which go to form it, seeing that they hang one upon another; however many of them there may be, it is still no stronger than the weakest link. It is the number of *independent* facts which point to a conclusion, which do not in fact hang upon one another like the links of chain, but which are like separate strands in a rope, that give cumulative strength to an inference. If one strand of the rope breaks, the others may still hold, but if one link in the chain parts, what becomes of the conclusion?

In his chapter on the treatment of neuralgia, Dr. Anstie insists on the necessity of a great abundance of food being given; he thinks that patients so afflicted will benefit greatly by a nutrition considerably richer than that which is needed by healthy persons, and he appeals, in confirmation of this view, to the opinion which Dr. Blandford has expressed with regard to the advantage of much feeding certain chronic insane patients. But surely there is here some need of discrimination of cases. So far as our experience of insanity goes, we are quite sure that to stuff certain insane persons with food which they cannot properly digest is to do them a great deal more harm than good. And we have yet to learn that the amount of food which may be put down a person's throat is a measure of the amount of nutriment which he is likely to get out of it, or that a mass of undigested food traveling through the intestines is of much benefit to the man. Does Dr. Anstie's experience enable him to say positively that in every case of neuralgia the patient is capable of digesting and assimilating a larger quantity of food than that which is needed by a healthy person? If the patient has taken less food than he should do, under the idea of improving his health by reducing his diet, or for some other reason, of course he will soon experience the benefit of increasing the quantity, but that is not the same thing as stuffing himself with food. Not long ago it was the fashion with certain physicians, and perhaps it still is, to prescribe to their patients several re-

freshers of brandy, or some other stimulant, during the day, on the ground that they required a greater quantity of stimulants than that which was needed by a healthy person, and we have heard of young ladies regularly taking their brandy and milk at intervals throughout the day. We are glad to see that Dr. Anstie protests against the use of alcoholic liquors except in such moderation, *with the meals*, as may assist primary digestion without inducing any torpor, or flushing of the face, or artificial exhilaration. "I cannot," he says, "too expressly reprobate the practice of encouraging neuralgias, especially women, to relieve pain and depression by the direct agency of wine or spirit; it is a system fraught with danger of the gravest kind." Now, without wishing for a moment to put an abundance of food on exactly the same ground as an abundance of stimulants, may we not justly put forward a word of caution against the absolute enunciation of a broad rule, and ask for a careful discrimination of cases? We cannot help thinking that the systematic stuffing of a gouty neuralgic would be as prejudicial to him as we believe it would be to a gouty melancholic. Would Dr. Anstie apply the rule to a patient suffering from *angina pectoris*?

But we must now bring this review to an end, without quoting, as we should have liked to have done, some very sensible remarks which Dr. Anstie makes upon the measures that should be taken to avert neuralgia in those who may be reasonably assumed to be predisposed to it. We have only been able to touch upon certain points here and there in his extremely suggestive book, which we end, as we began, by recommending strongly to our readers. But as we began with a suggestion so will we end with a suggestion—that in any future edition Dr. Anstie should forbear the use of such French and Latin phrases as *au fond*, *inter alia*, *locus in quo*, *points douloureux*, *modus operandi*, *locus minimæ resistantiæ*, &c., and should use instead their English equivalents. Now and then an error in the text has escaped correction. Take, for instance, this sentence:—"A lady, who had been the victim for twenty years of an extremely severe neuralgia of the opthalmic division of the fifth, which attacked her daily, and caused great injury to her general health, was not merely benefited, but absolutely removed, at any rate for a long period, by a single application of the current." Where was *the lady* removed to?

The West Riding Lunatic Asylum Medical Reports. Edited by J. C. BROWNE, M.D., F.R.S.E. London: J. and A. Churchill. 1871.

Although it would be untrue to say that this is a valuable contribution to science, yet that it is an important addition to medical literature no one will deny. In it we see fresh evidence of the fact that asylum physicians are becoming more and more alive to the necessity for asserting themselves, and showing themselves in their true colours. If they do nothing else they will furnish an excellent answer to certain disappointed men who, having failed to establish themselves in practice, have assumed the dignity of censors of their medical brethren. Judging all men by their own standard, they have not failed to single out asylum physicians as an object of attack, and have charged them with all the sins of incompetence, negligence, and ignorance. For nearly a year these unfortunate men could hardly take up a medical paper without seeing a violent attack on the manner in which they performed their duties, and not only did the medical journals assail them, but also a certain portion of the daily press, taking its cue from these writers, heaped on abuse and censure until the most impartial reader began to think that the asylum doctors must be a set of the most unmitigated ruffians under the sun. Of the unfairness of this we will say nothing now; we hope that a more generous spirit will prevail in future, and that physicians in asylums will rather be encouraged to do well than violently abused for occasionally making those mistakes to which all human beings are liable.

The volume before us is, as we say, evidence that those of the medical profession who have given themselves up to the care of the insane are not necessarily so devoted to non-medical duties such as farming, &c., nor so warped by prejudices, as to neglect the primary object of their lives. And if we should have to differ from the conclusions at which certain of the writers arrive, we at the same time bear a hearty testimony to the amount of zeal and hard labour which has evidently inspired the whole work.

Dr. Browne opens the series with an article on the connexion between cranial injuries and mental diseases. The paper is, however, only a report of one stage of an investigation which he is pursuing, and so we will not enter into a criticism until we have the volume for next year before us,

when we are promised his concluding remarks on the subject. Suffice it for the present to say that the article shows evidence of careful thought and extensive reading, and if there are remarks from which we differ just now, we are willing to suppose that he will bring evidence in support of his conclusions in his succeeding paper.

In the next paper, "Observations on the Physiological Action of Nitrous Oxide," Dr. Samuel Mitchell gives a very interesting series of experiments with that gas. In cases of melancholia in which he administered it, he had the satisfaction of rousing the patients to a state of temporary exaltation; when, however, the administration was stopped, they reverted more or less rapidly to their former state. For our own part we should have expected nothing else, and should as soon look to hear that a man who had had a surgical operation performed under chloroform should never again feel pain, as that the effects of nitrous oxide would be permanent. The paper, however, is an interesting one, and shows signs of extensive knowledge of the literature of the subject, and a painstaking disposition in the prosecution of physiological experiments.

In a paper on the "Sphygmograph in Lunatic Asylum Practice," Mr. George Thompson confines his present remarks practically to observations on the pulse in general paralysis of the insane. While giving him all credit for having devoted considerable labour to the elucidation of his subject, we must say that we should not care to trust to the sphygmograph alone for the diagnosis of general paralysis. If, as he shows, the pulse-tracing of a general paralytic can hardly be distinguished from that of a healthy man who has been dipped in cold water for a few minutes, we sincerely hope that his paper will not meet the eye of military maligners, who will by this suggestion be able at very short notice to come off with flying colours before a medical board. At the same time there is light behind the darkest cloud, and Mr. Thompson may be the means yet of clearing up a question which is at present involved in much obscurity. As far as he has gone, however, it must be said that he has shown some tendency to look for facts to support theories, rather than to find theories to support facts.

One of the most interesting papers in the series is one by Mr. Charles Aldridge, on "Ophthalmoscope in Mental and Cerebral Diseases." This paper owes its chief attraction to a careful summary of 102 cases of epilepsy, which occurred in the West Riding Asylum. This is the only fair way to ap-

proach a subject of which little is really known. From a series of 102 cases we are entitled to draw general deductions, and no satisfactory theories can be formed from a mere exposition of the views of a writer on a matter which is still in its infancy. The appearances observed with the ophthalmoscope were strikingly similar. We should not be surprised if more extensive investigations with this instrument led to important results, and to definite ideas of the treatment of epilepsy.

In a "Contribution to the Statistics of General Paralysis," Mr. J. W. Burman has summarised a great many asylum reports; but it does not seem that he has added much to our knowledge of the subject. He has also quoted from well-known writers on general paralysis, but except as affording an easy means of reference the paper is not of great value, though it does credit to the writer's capacity for reading.

If, as Mr. J. B. Ward says in an article on "The Treatment of Insanity by the Hypodermic Injection of Morphia," there is really more tolerance of opium when thus administered than when given by the mouth, we shall be glad to hear again from him on this subject. At present, however, we must say that our own experiments have no such decided results. We have, indeed, found in certain cases that a smaller dose of the drug was sufficient to procure sleep, than if it had been given by the mouth; but this was not observed so often as to induce us to attach much importance to it, and we ourselves use the hypodermic method now chiefly in those cases in which it is difficult or impossible to get the patient to take medicine by the mouth.

Mr. G. H. Pedler handles a very important subject in a paper on "Mollities Ossium, and Allied Diseases," and handles it from a proper point of view. When the cases of broken ribs were occurring so frequently in asylums it was attempted to be shown by mechanical tests that the bones in particular classes of the insane were abnormally frangible. For our own satisfaction at the time, although fancying there must be some truth in the matter, we performed a number of experiments with the result of showing that the test by weight, &c., was not reliable. Mr. Pedler procured the assistance of a chemist to analyse the sternum of a case of dementia, which died at the age of 43, and found the greatest possible change in the constituent parts of the bone substance. If he returns to this subject, we should advise him to print along with his observations a table of the normal constituents of bone, as being handy for reference.

Mr. W. Lawrence describes the means employed in the West Riding Asylum for the artificial feeding of the insane, and as those means are for all practical purposes identical with those employed elsewhere, we cannot see that much good will be attained by the publication of the paper. At the same time he omits all mention of the nose funnel, which is a very useful instrument, and in some cases is attended with better moral results than the stomach pump. It consists of a small glass or silver funnel, with a nozzle about two inches in length, which is placed in one of the nostrils. A teaspoonful at a time of the fluid with which it is proposed to feed the patient is placed in the funnel, and escaping through the nozzle it falls into the back of the mouth, where it is swallowed involuntarily. The disadvantage of the method is that it takes longer time than the stomach pump, and the chief advantage is that it reminds the patient that he is able to swallow, and very often has the desired effect of making him take his food naturally.

Several other papers there are in the book which we are unable to notice. We have said enough to show that the West Riding Medical Reports are up to the average. There are, as we have hinted, papers which can only have been inserted for "padding" purposes, or in order to avoid giving offence to those who desired to aid in a good cause. But on the whole the book is quite worth perusal, and we have no hesitation in saying that we look forward to the appearance of the next volume.

A Treatise on Diseases of the Nervous System. By WILLIAM H. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System and of Clinical Medicine in the Bellevue Hospital Medical College, New York. Appleton and Co. 1871.

Dr. Hammond does not claim for this treatise that it is exhaustive, but expresses a hope that it will be found sufficiently complete for instruction and guidance. It is founded, to a great extent, upon his own observation and experience; he has certainly not hesitated to express his opinions; and the reader may feel assured that if he does not learn all that is known or conjectured with regard to a particular disease, he will, in learning the results of Dr. Hammond's experience,

gain a great deal of practical information. We had hoped to have given a full review of the book, wherein we should have been compelled to express a positive dissent from some of Dr. Hammond's opinions, but we must content ourselves, on the present occasion at any rate, with simply bringing it to the notice of our readers. The following extract, in which the author is speaking of the treatment of insanity, conveys Dr. Hammond's opinion:—

The great difficulty with asylums is, that they contain only insane people, and the prevalent idea among the public—and it is often carried out by the officers of asylums—is, that institutions for the insane are simply places in which dangerous or troublesome maniacs are to be kept in safety. My own idea is, that the best of all places for a lunatic of any kind is the family of a physician. The association of an insane person, day after day, year after year, with others similarly affected, with scarcely the least contact with people of sound minds, is certainly in opposition to the first principles of true psychological medicine.

Asylums are, however, for the present at least, necessary, and it is with great pleasure that I am enabled to state, after having visited a great many institutions for the insane in Great Britain and on the Continent, that American asylums are very far superior in every respect.

The review of a little American book, entitled “Behind the Bars,” which we give in this number, will serve to show that one who has had far better opportunities of knowing the interior of asylum life in America than Dr. Hammond, thinks that there is still room for improvement, notwithstanding the great superiority in every respect of American asylums over the asylums of Great Britain and the Continent.

Studien auf dem Gebiete der aertztlichen Seelenkunde. Gemein-fassliche Vorträge. Von DR. FRIEDRICH W. HAGEN. Erlangen: Eduard Bezold. 1870.

Six lectures on psychological subjects, of a more or less popular character, constitute this volume. The first lecture is devoted to a discussion of the value and importance of psychology in the study of psychiatry; the author defending, with no little zeal, the method of observation of self-consciousness in the study of mind, and pointing out how essential it really is. To the lecture he appends a detailed

and vigorous criticism of the first part of Dr. Maudsley's work on the "Physiology and Pathology of Mind," a book which he thinks may possibly do much harm, on account of the favour with which it has been received in Germany. The first point which he makes is ingenious and skilful. After setting forth what he conceives to be the general tenor of the argument, he points out that at the very beginning a singular mischance occurs to the author: he says—

As a friend of German literature (with which, it must be said with praise, he exhibits an unaccustomed acquaintance), he places at the head of his book a motto from Goethe, but in an unlucky manner out of Faust—"Ich sage dir, ein Kerl der speculirt," &c. Has Dr. Maudsley not considered that it is the Devil who speaks so, the Spirit who constantly denies (*der Geist der stets verneint*), and who shortly after the utterance of the cited sentence, calls after Faust—"Despise only Reason and Knowledge, the highest powers of man—so I have thee absolutely."

Dr. Hagen's criticisms, which are acute, are made with dialectical skill and with a refreshing vigour. The claims of psychology, though perhaps over estimated, are set forth clearly and conclusively in his lecture, but we certainly think that he undervalues much the importance of the investigation of mental disease from the physical side, and that in divorcing, as he apparently does, the higher mental faculties from all connection with bodily organisation he is entirely in error. At the same time, we gladly allow that the perusal of his lecture will be found suggestive and instructive. *Fas est et ab hoste doceri.*

The second lecture, in which the author endeavours to explain from a psychological point of view the mode of origin of fixed ideas and delusions, we have found to be diffuse, somewhat tedious, and not very instructive. His long and elaborate dissertation does not throw any new light upon the subject, while the matter of it has been put in a more concise and thorough way by other writers. In fact, to speak the truth, there is a multitude of words embodying vague speculations which do not convey much information.

In his third lecture, he discusses the question whether Joan of Arc was a partially insane person, as Calmeil, Lelut, and Moreau have supposed. He admits that appearances at first sight are much against her—

If you asked me, in fact, what I should do, if a peasant girl were introduced to me at this day, who went about with a standard in her hand, and

announced that she was called to revenge the shame of Germany, because the Virgin Mary appeared to her every day and commanded her to do so—if you asked me whether I should refuse to receive her into the asylum, on the ground that she was not insane, I should be compelled to answer “No, I should not refuse. And I believe you would all be of the same opinion.”

Nevertheless, while admitting the daily visions which she believed she had to have been truly hallucinations, he holds that her reason was not affected. He places her in the same category with Socrates, Pascal, and Nicolai of Berlin, whose examples prove that there may be hallucinations both of sight and hearing, not unlike those which Joanna had, while the mind remains perfectly sound. At that time the belief in the possibility of a direct intercourse with spirits, good or bad, was general; not only the heroine herself, but her contemporaries, friends as well as enemies, bishops and learned persons and the University of Paris, were convinced of the fact that in her case there was a real intercourse with spirits—only that to the French, to whom they were useful, they were good spirits; to the Burgundians and English, to whom they were hostile, they were evil spirits. To declare the whole generation insane because of such a belief would certainly be, as Dr. Hagen says, a little too strong. Notwithstanding her hallucinations, and the bodily disorder which they indicated, he holds that Joanna was a true heroine, sane in mind, who steadfastly pursued through extraordinary difficulties, with singular sagacity, perseverance, and bravery, the noble aim of delivering her unhappy country from its enemies, and so acquired immortal fame. A remarkable, but by no means solitary, instance, which might be adduced to show how powerfully the course of human events has been affected by persons who, had they lived in this age, would unquestionably have been shut up in lunatic asylums!

Dr. Hagen's fourth lecture, entitled “*Narrheit*,” which is quite of a popular character, begins with a protest against the vulgar use of the term “*narrheit*” to signify insanity. “*Narrheit*” properly means folly, but it appears that the common people speak of an insane person as “*ein narr*,” or a fool, and of the lunatic asylum as “*das narrenhaus*,” or the fools' house. He proceeds, therefore, to set forth at length the wide differences which there really are between fools and insane persons, enumerating and describing different kinds of folly of which men are guilty, and pointing out how much such follies differ from insanity. The following story,

which he quotes from the Hungarian traveller, Vambéry, shows that in certain parts of the world it is yet permissible to act in an extraordinary way without running the danger of being put under restraint as a person of unsound mind :—

A certain dervish, deeply penetrated with the conviction of the justice of the claims of Ali to have been the first Caliph, had years ago made a vow to use his speech for no other purpose during his whole life than to cry out the words Ali, Ali; believing that he would thereby show himself the most zealous partizan of the Caliph, who had been dead for more than a thousand years. In his house, for he was married, the only words he used to his wife and children, to his friends and relations, were Ali, Ali; when he wished to eat or drink, or was ever in want of anything, he cried out Ali, Ali; when he would beg or buy anything in the Bazaar, he exclaimed Ali, Ali; when any one abused him or gave him anything, he cried out Ali, Ali; and latterly his zeal mounted to such a pitch that, like a man possessed, he traversed the streets all day on horseback, swinging a staff high in the air, and calling out wildly, Ali, Ali.

The zealous dervish was, of course, deemed to be a very holy man.

Of the fifth lecture, which is on “The Moral Treatment of the Insane,” it is not necessary to say anything here. It is entirely popular in character, and the views propounded in it are now almost as familiar as household words.

The last lecture is entitled “The End sanctifies the Means.” The author discusses the proposition from a medical point of view. Deliberate torture of animals properly excites horror and disgust in every right-minded person; but the physiologist is held to be quite justified in practising painful vivisections on animals, in order to make scientific discoveries which may benefit mankind; the end, therefore, sanctifies the means. He gives several other illustrations drawn from the different departments of medicine, law, and morals, but in the end fails to bring the problem to a definite and satisfactory solution. His readers will, we think, be puzzled to discover what his conclusions are, unless they be these—that in any given case, where the aim is good, the means are practically justified, but that it is necessary theoretically to maintain the abstract principle that the end does not justify the means, in order to satisfy the conscience. Dr. Hagen appears, indeed, to hold very strong opinions as to the propriety of separating the department of morals entirely from every other department of human investigation, if not from human action altogether, and protests vigorously against the

tendency to encroach upon this region apart, which modern science displays. In this last lecture he is contemptuously critical on those who take a different view, and, in much of what he says, he is superficial in no small degree.

Die Kant'sche Erkenntnisslehre widerlegt vom Standpunkt der Empirie. Ein vorbereitender Beitrag zur Begründung einer physiologischen Naturauffassung. Von EDMUND MONTGOMERY. München: Ackermann. 1871.

This book is not a monograph, but a fragment of a larger work which the author has thought fit to publish before the complete work is ready for publication. He is apparently an Englishman, who has resolved to write in German for two reasons—first, because he considered it most fitting to meet the great philosopher of Königsberg in his own language; and, secondly, because the most eminent judges of the Kantian philosophy and the chief defenders of scientific Transcendentalism are Germans. If we may judge by the profusion of epithets of abuse which he uses to pour unmitigated contempt upon the transcendentalists and their allies, and by the vigour of his style, he would certainly seem not to lack command over the language which he has selected. His introductory chapter is, indeed, a pattern of downright hearty abuse, mingled with the bitterest contempt, of the *à priori* idealistic philosophers, and a laudation, somewhat too hyperbolic for our taste, of empiricism. We believe with him in the mighty mission which Science has in the future; with him, too, we feel no doubt of the heavy blows which it has already dealt to many beliefs of the past; but we do not believe in the wisdom of abuse, or in the usefulness of exaggeration. Science can well afford to go calmly and confidently on its own way, and it is a grievous pity when its disciples imitate the bigotry and intolerance of theological warfare. It has been wittily said of a certain eminent scientific person that science was his forte and omniscience his foible, and we fear the description might sometimes be justly applied to other followers of science, who, with more zeal than discretion, seem to claim for its revelations an infallibility which they would be the first to deny to revelations of another kind.

After this introductory diatribe, the author proceeds to give

an exposition of the principle of the Kantian philosophy, an exposition of which we may say that, so far as it goes, it is clear, but contains no little repetition, and occupies nearly half the book. Moreover, without being so complete, it reminds us not a little of the exposition of Kant's philosophy in Schwegler's "*Handbook of the History of Philosophy*," a popular German manual, which has gone through five editions. Indeed, the text of Mr. Montgomery's book follows very closely in some parts that of Schwegler's *Handbook*. Thus, for example, speaking in reference to Kant's celebrated categories, which he enumerates, Schwegler says:—

Aristotle has already attempted to construct such a table of categories, but, instead of deriving them from a common principle, he has merely empirically taken them up as they came to hand; he has committed the error also of including space and time among them, which, however, are not intelligible, but sensible forms. Would we have, then, a complete and systematic table of all pure notions, of all the *à priori* forms of thought, we must look about us for a principle. This principle, from which the pure notions are to be deduced, is the logical judgment.

With this compare what Montgomery says of the categories:—

Aristotle first attempted to discover them; but Aristotle had not found out the common principle out of which they are all to be deduced. He simply took a subject as it came to hand, and examined quite empirically how many different sorts of predicates could be attributed to it. So it came to pass that his table of categories was neither perfect nor pure. Besides, he had also ascribed to the pure ideas of the understanding space and time, which belong to quite a different faculty, to forms of sense-perception. For the discovery of the categories we must make use of the logical judgment or guide.

However, both authors are giving an account of Kant's views, and are presumably speaking as far as possible his words; so that it does not follow that Mr. Montgomery has taken his exposition from Schwegler. At the same time, with so good a summary as that by Schwegler ready to hand, it was hardly necessary to go over the same ground in a less complete manner. For our part, we must confess to being somewhat weary of abstracts of Kant, and Fichte, and Schelling, and Hegel, whose systems of philosophy, admirable as they are as exhibitions of intellectual skill and power, nevertheless produce in the mind a profound feeling of the vanity of thinking about thought.

Having completed his exposition, Mr. Montgomery proceeds to his criticism of the Kantian principle.

The fundamental error, he says, which Kant has committed, lay in the violent division of the knowledge-faculty into a passive and into an active half, and then in the assignment of the whole of the passive roll to sense-perception; of the whole of the active play of knowledge, on the other hand, to abstract intelligence. This quite arbitrary division, unwarranted by any kind of fact, is the essential reason why, in spite of all acuteness and of concentrated industry, the noble psychological sagacity of Kant has been completely wrecked on the problem of knowledge.

This passage will serve to show how completely the author believes Kant to have failed in his great philosophical task, and how confidently he goes to work to overthrow him. We cannot follow him here into the details of his criticism; it is marked by a great deal of repetition, while his easy command of words leads him into a diffuseness of style, and sometimes seduces him into such a representation of Kant's argument as reads very much like a travesty. Suffice it to say that he combats vigorously the opinion that space and time are subjective, *à priori* given forms of all perception—the one fundamental assumption, as he calls it, of the Kantian philosophy—and maintains energetically that they are acquired *à posteriori*, as the result of experience. By what processes? "First, organic function, the muscular activity; secondly, the specific sensation excited thereby, which give the empirical element; and, thirdly, the reproduction in memory of all the successive forces of the excited sensations in the verity of an idea."

We shall be doing no injustice to Mr. Montgomery by saying that he does not set forth the grounds on which he bases this philosophy, but contents himself with the often repeated declaration of its truth. We should have preferred to this assumption an exact and formal demonstration of the merits of the experiential philosophy, but perhaps this may come in the larger work which is in preparation. If so, he will probably do more to refute Kant's system of philosophy than he will accomplish by a lifetime of subtle and elaborate discussion of propositions which remain objects of dispute only because of a lack of exact knowledge of facts, and of a want of agreement as to the meaning of the words used. We are disposed to agree with Sir Thomas Brown, when he speaks of certain long discussions in metaphysical philosophy as only fit to be bound up with Tartaretus *De modo Cacandi*.

A New View of Causation. By THOMAS SQUIRE BARRETT.
London: Provost & Co. 1871.

Were we to express honestly the feeling which a perusal of Mr. Barrett's book has occasioned, it would be a feeling of surprise that he should have made a book out of so little matter. It contains 213 pages, of which only 42 are devoted to the exposition of the new view, the rest of the volume consisting of extracts from different authors who have written upon causation, and of a long index printed in large type. Besides the index, there is a syllabus of contents occupying many pages, and there is a list of the principal works which the author has read or consulted. The type is large, and the text runs as a narrow strip down the page between meadows of margin. By these means, with the help of blank leaves and blank pages, and a very liberal distribution of blank spaces, wherever it was possible to interpolate one, the book has been manufactured. It is a pity that the author did not content himself, at any rate for the present, by putting forth his views in the more fitting form of an article in some journal.

But what are these views? and wherein are they new? Mr. Barrett points out clearly and forcibly that the necessary connexion which is commonly supposed to exist between cause and effect, is simply a generalisation from observation, and that the necessity is entirely subjective—a logical necessity, and not an objective necessity. It is true that over and above the idea that an event unconditionally and invariably accompanies its cause is the notion that it *must* do so—that it is *obliged* to do so; but this idea of necessity is mental, and we cannot justly transfer the attribute of necessity from the mind to the relation between natural events. But what is there new in this? Mr. Barrett only points out, what most scientific men have long recognised, that a so-called law of nature is merely the widest generalization which we have been able to form concerning the phenomena which come under the law; it is a *general* fact which is invariably true of all the individual facts. If it did not apply to all the individual facts without exception, it would not, of course, be truly a general fact. Of course, too, it is liable to be upset tomorrow, as an unsound generalization, should a new fact turn up which it does not cover. But so long as no such new fact does show itself, the so-called law is the ultimate generalization of our experience, in which, therefore, we are bound to

believe, on the condition of having such a thing as belief at all. However it be as to a necessity, a *must* between the events, it is certain that the *must* we make between them is a subjective necessity made objective, and can be none other. Whether the internal *must* does really correspond with and betoken an external must, who can say? "God knows; we certainly do not." There may be actually between the events in nature something more than what we mean by necessity, or something less than what we mean by necessity, or there may be no necessity at all; but as to the real nature of it we, with our feeble glimpses of a small part of the universe, are no more qualified to give an opinion than an oyster is qualified to give an opinion respecting the moral character of the person who swallows it. We think Mr. Barrett is, on the whole, right in the views he has well expressed, but he is utterly mistaken in supposing that there is anything new in them. He has mistaken the development of an idea in his own mind for a new development in philosophy, and in his delight at the new-born thought has rushed hastily into print to declare it to all the world; therein acting somewhat after the manner of that domestic fowl, which, having laid an egg, forthwith announces the fact by a jubilant cackling, as if an egg had never been laid before in the world. The comparison may stand because of its aptness, but it must not be thought that Mr. Barrett has not written with good taste and in a philosophical manner.

Behind the Bars. Boston: LEE AND SHEPPARD, 1871.

"A land of darkness, as of darkness itself; and of
the shadow of death . . . and where the light is as darkness."

The impression left after the perusal of this little work is a very sad one, notwithstanding that its sensational title at once excites a feeling of distrust. It must always be painful to contemplate suffering and disease which we have no power to avert and little to alleviate, but it is with a deeper feeling of sorrow that we are brought face to face with suffering that need not and ought not to exist. The purport of this book is to portray the system of management now existing in some American Asylums, and by appealing urgently for interest to be awakened to the subject, to cause many evils to be corrected; it professes to represent the system in daily action,

and as it told on the lives individually and generally of the inmates, and emanates from the pen of one who was herself a patient in an asylum.

The work is introduced by a preface by the editor, Mr. George Lunt, and while not agreeing with him to the whole extent of the amount of praise he bestows on the manner and ability of the writer, and while thinking it bears evidence of being, as it was almost impossible it could be other than, a one-sided and sensational view of the whole system, yet there is every reason, in reading it, to feel that the authoress has endeavoured to be accurate and impartial; that "nought is set down in malice," but that, to quote the editor's words, "the author is actuated by no desire to cavil needlessly, but only, in accordance with the true elements of enlightened humanity, seeks to point out details of the system described so evidently defective as to insure all practicable reform as soon as they are generally known, and to render such aid as is possible towards elevating the standard of treatment, and hence improving the condition of the most unfortunate beings of the human race," and, as he justly adds, "assuredly whatever tends to throw a ray of light upon this dark valley of the shadow of death is of infinite human concern." And viewed in this light, in addition to the value of its advocacy of the great reforms still evidently needed, it becomes an instructive essay for all those who have the responsible care of the mentally afflicted. Such, who have daily intercourse with the insane, must feel how well it is to be reminded of the point of view from which many measures most needful, and only adopted from the best and kindest motives, are prone to be regarded by the patients themselves; how irksome and trying even the most necessary restrictions and control often prove to them, especially as being rarely able in their own case to admit or recognise the need of any; and how desirable it is therefore not to impose unnecessary restrictions; nor to have those that must be enforced made a source of any avoidable irritation. Such control as is necessary should be considerably, though firmly, carried out, in the endeavour to convince the patients that no advantage to others, but their own good only, is aimed at in anything done that is opposed to their wishes.

It would, however, be very unjust towards the heads of the institutions here described, not to say that, in reading the complaints and criticisms of the writer, the impression is conveyed that on some points she was not a competent judge of

the necessity or advisability of the measures pursued, and was unable to appreciate the reasons that dictated them. The task of a superintendent, always an anxious and difficult, is often a thankless one; those under his care naturally see all from their point of view only, and frequently misinterpret a system, and must be ignorant of the reasons that guide the physician in the treatment of individual cases. To this want of knowledge may probably be attributed, in some degree, without her having any wish to distort facts, the extent of sorrow and indignation expressed at the restrictions in the way of visits from friends and correspondence with them, though the total exclusion of friends and complete barrier to any intercourse with them, if kept up, as here described, apparently to a painful and unnecessary degree, is very foreign to our English practice at this time. Another matter in which the writer's judgment was probably at fault, is instanced in her mention of the view taken by the physicians of excessive indulgence in emotional manifestations and tears; she would be unaware of the indications these would convey to those who had knowledge and experience to guide them. But while making these admissions, and believing that they probably ought to be borne in mind in the perusal of this work, they do not greatly affect the real tenor of it, or the principles involved. If the author, in the main, correctly depicts what she has witnessed, there is great need of reform in the system of management of American asylums, which justifies the most urgent demand that the need should no longer be disregarded, and amendment no longer delayed. The paramount importance of the interests concerned, and the principles of justice and humanity involved, lead to the belief that the contents of this little book should not be treated with indifference, but that those in this country in a position from knowledge and experience to do so, should press these subjects on the consideration of their American fellow-labourers, not as seeing only the mote in their neighbour's eye, but that happily the system described no longer, in most respects, applies to English asylums.

In America still remains unremoved the great blot of the habitual employment of mechanical restraint. After thirty years' experience of the non-restraint system in daily practice in England, on the largest scale, it can still be said of America as the author writes—"In Germany, in France, in Italy even, less physical restraint

is made use of than in this country. And we boast of our civilisation!" Surely this must be felt as discreditable to a country that boasts of its reforms and progressive tendency. How can it be held excusable that such appliances should still exist, and be supposed to be needed, in the face of the total abolition of them so long effected here? From the commencement of the work in England it has been viewed and investigated by numerous enlightened and humane American physicians who have visited our asylums, public and private; and yet we still read of mechanical restraint being maintained and habitually resorted to; of even harmless, depressed patients strapped nightly in their beds, straight jackets forced upon them—old instruments of torture and horror banished from within the walls of Hanwell by Conolly more than *thirty* years ago. Well may the writer exclaim "Oh, too easy appliances for those who fit them on," for, indeed, she strikes at what has ever been at the very root of the evil and one great cause of the reluctance to discontinue them; they have ever been the substitute for sufficient and efficient attendance—sufficiency in number, efficiency in kind. And when these instruments are (most reprehensibly) left in the power of the attendants themselves to force them on their unfortunate charges at will, what a temptation is opened to abuse. "With these convenient appliances these attendants can go where they please; the patient is safely bestowed; one knot does it all; and away they haste to their enjoyment." Necessarily such a state of things could not exist in a well supervised asylum, but in those described the attendants seem almost wholly uncontrolled; and while experience teaches us how the very best of them need much supervision, the writer describes as her experience educated refined gentlewomen being left wholly to the mercy of ignorant inexperienced girls, as having no companionship of their own class, and no appeal from the decisions of those so utterly unfit to dictate and rule. If this was indeed so, the spirit in which she writes of the attendants would not appear an unkind one, for much must have been suffered at their hands, so that one could not well marvel at some exaggeration in her recital of these things, or if she had failed to make any of the allowances which she freely does for them. The office of attendant being a trying one, it is well known that relaxation is needful, and, therefore, that the numbers should be sufficient to secure this without the patients being the sufferers in order to effect it. In these asylums it would

not appear to be so provided, and there would seem to be no controlling power to enforce the proper routine of work and relaxation; the arrangements being in no way calculated for the comfort of the inmates, the care of whom the author represents as being regarded as a secondary and incidental matter, instead of being made the first consideration.

The writer dwells much on the subject of convalescent patients being retained on and on until occasionally the improvement passes off, leaving a chronic mental state such as it is quite possible for an asylum life, unwisely protracted, to encourage and confirm. Even a very necessary detention in order to *confirm* a cure is apt to be deemed by the patient a harsh and almost unjustifiable measure, and when we see how difficult it is to prevent the patient's mind from regarding a residence in an asylum as in some sort an imprisonment, and the bitter feeling occasionally engendered by it, this may well weigh with us against its being unduly protracted, and the strong expression of feeling by the writer on this subject be in some degree a warning to those, not in America only, but here also, who would in every case, and at once, have recourse, as the first and best measure, to sending a patient to an asylum.

“A closer and broader view of the subject,” she argues, “will develope other methods of treatment, and will prove to us its capability of varied modes of handling, which are unquestionably more agreeable for the patient, while equally helpful and more truly comfortable for their friends. Another system might involve far greater care and difficulty than the enrolling them all under one regimen *en masse*.”

Many details of arrangements, as being unsatisfactory and distressing to the patients, are alluded to, but much as these must tell on their welfare and the comfort of their daily and hourly lives, they seem partially lessened in importance by comparison with the great existing evils of want of proper supervision, and the paramount one of the maintenance of mechanical restraint. These great points amended, there is little doubt improvement in all others would follow in their train.

That the use of mechanical restraints should still be defended, and even advocated, by American physicians, we in England cannot but view as a thing deeply to be regretted. But while they advocate the continuance, in some degree, of the employment of it, they may be willing, with us, to

deplore its abuse. Many of the evil consequences that follow from the permission of the least use of it are forcibly described in the pages of this recital. The attendants having the instruments of coercion in their own hands threaten the patients with the use of them, and probably do use them to a far greater extent than is known to or would be sanctioned by their superiors; quick to lay them aside when the visits of the Trustees are expected, and to present their charges before them in comfortable dress and array, they are probably not unapt to deceive the physician also, whose eyes may thus be blinded to the evils that are really practised.

It is now nearly twenty years since the visit of a philanthropic American lady to this country, who inspected our asylums with much interest and intelligence. We know not whether she came to teach or to learn, but at any rate to her influence in having called attention to the abuses then existing has often been attributed the fact of measures having been taken to investigate and thoroughly reform the system of management in Scotland. If Miss Dix was able to be instrumental in effecting such a good work here, may we not hope that some reflection of it may now tell upon the asylums of her own country; that American physicians may give heed to our earnest entreaty from England to reform their present system, and be induced to believe that it is impossible to allow the use of a little, of occasional restraint to exist, without grave abuses creeping in, and its infecting and affecting the whole tone and system of management. "The principle of the non-restraint system will admit of no compromise."

American Religion. By JOHN WEISS. Boston: Roberts Brothers. 1871.

Mr. Emerson has a great deal to answer for, if he is to be held responsible for the effects of his style on a certain class of American literature. To him, in fact, it seems to be owing that certain writers, who have something to say, cannot be content, notwithstanding the excellent examples of style which they have in some of their countrymen, to give it plain utterance in plain language, but will wrap it up in a mystical, spasmodic, and stilted style, and will, instead of allowing their sentences to flow easily on, insist on jerking them out like water from a narrow-necked bottle. Some of them certainly strive very hard

to be incoherent, and to attain to a delirium of exaltation in which they rave in extravagant tropes and incongruous metaphors. We do not intend this statement to be applied strictly to the author of "American Religion," although he certainly goes some way in the direction of delirium, and does injustice to his ideas by the grotesque style in which he clothes them. Take, for example, any sentence at random from his pages:—

Propositions that are styled self-evident, like the "blazing ubiquities" of the Declaration of Independence, are not so till they become evident to ourselves. But then they exist nowhere else. Previous to that, we may accede to them as abstractions, but they are not evident till they become essential to our life and happiness. The beatitudes are as distant as the Guano Islands, as superfluous as the whiteness of a buried tusk till the day's comfort calls for them. Then we justify them, and become in person the only authorization they can ever acquire.

This extract is rather a fair sample of three hundred and twenty-six pages of like matter, poured forth by the author without method in a strain of prophetic exaltation. All we can say of it here is, that it would have been much more to our taste if such thoughts as there are in the book had been less hazy, and had been expressed in more simple and concise language. But why, the reader may wish to ask, is it called "American Religion?" Is American religion to be something different from the religion of other countries? Yes; as it would appear to be part of the mission of America to have the biggest rivers, the biggest railway and steamboat accidents, the biggest swindlers, the biggest fires, the biggest preachers—in fact, the biggest of everything; so it would appear to be destined to have the biggest religion—to be in this, as in all other things, "the pride and pattern of the earth." Its best and most cultivated writers foresee the accomplishment of this mission, as they see, with prophetic vision, the star-spangled banner wave over a regenerate world.

The years that o'er each sister land
Shall lift the country of my birth,
And nurse her strength till she shall stand
The pride and pattern of the earth.

Till younger commonwealths for aid
Shall cling about her ample robe,
And from her frown shall shrink afraid
The crowned oppressors of the globe!

But the capacity of man for self-government is yet on its trial. What if it fail?

Report on Spiritualism of the Committee of the London Dialectical Society, together with the Evidence, oral and written, and a Selection from the Correspondence. Longman and Co. 1871.

The London Dialectical Society appointed a committee to examine the phenomena of so-called Spiritualism, the result of which has been a report that is not unlikely to be quoted by future historians, as striking evidence of the credulity and ignorance of many persons who had received the average education of the time. It is of some interest, scientifically, in relation to the doctrine of evolution, as it proves the persistence, in modern thought, of ideas and feelings which belong properly to the stage of mental evolution of our savage ancestors. It is, in fact, like the custom of wearing ear-rings, decided evidence of our descent from savages; we have plainly not yet outgrown some of their superstitions, just as we have not yet got rid of the little point of the ear which betrays our descent from a hairy animal with pointed ears.

The committee invited several eminent men to be present at their investigations, and, among others, Professor Huxley, whose characteristic reply was as follows:—

I regret that I am unable to accept the invitation of the Council of the Dialectical Society to co-operate with a committee for the investigation of "Spiritualism," and for two reasons. In the first place, I have no time for such an inquiry, which would involve much trouble and (unless it were unlike all inquiries of the kind I have known) much annoyance. In the second place, I take no interest in the subject. The only case of "Spiritualism" I have had the opportunity of examining into for myself was as gross an imposture as ever came under my notice. But, supposing the phenomena to be genuine, they do not interest me. If anybody would endow me with the faculty of listening to the chatter of old women and curates in the nearest cathedral town, I should decline the privilege, having better things to do.

And if the folk in the spiritual world do not talk more wisely and sensibly than their friends report them to do, I put them in the same category. The only good that I can see in a demonstration of the truth of "Spiritualism" is to furnish an additional argument against suicide. Better live a crossing-sweeper than die and be made to talk twaddle by a "medium," hired at a guinea a *séance*.

I am, &c.,

T. H. HUXLEY.

We cannot be at the pains of giving an account of the extraordinary things which some of the inquirers have persuaded themselves that they saw. This, however, ought to be men-

tioned : that one member of the sub-committee at which the most extraordinary phenomena were said to have occurred was soon after seized with an obscure form of paralysis ; that another has become a victim of mental illness ; and that a third has been confined in a lunatic asylum. It is certain, indeed, that while the belief in the sad mixture of imposture and self-deception indicates a want of capacity of observation and a weakness of judgment in all who accept the phenomena as spiritualistic manifestations, the attendance of the so-called *séances* is extremely dangerous to some minds. Dr. Garth Wilkinson, a well-known spiritualist himself, published a pamphlet, about fifteen years ago, entitled, "The Homœopathic Principle applied to Insanity: A Proposal to treat Lunacy by Spiritualism," in which he advocated the treatment of insanity by spiritualism, on the ground of its undoubted tendency to produce insanity. "It is a well-known fact," he says, "that spiritualism has the power of producing mental excitement at first in nearly all cases ; and, in many instances, real insanity. My practice has furnished me with several such instances." We are not aware whether any success has followed this homœopathic method of treatment ; but we certainly agree with Dr. Wilkinson in his experience of the effects of spiritualism on persons of an excitable and not very stable temperament. Those who wish to see the subject discussed from a scientific point of view, should read the able article on "Spiritualism," by Dr. Carpenter, in the last number of the "Quarterly Review." It is a pity, however, that so much of the article is a glorification of Dr. Carpenter by Dr. Carpenter.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *Italian Retrospect.*

By J. R. GASQUET, M.B., Lond.

Studi Clinici ed Esperimentali sulla Natura, Causa, e Terapia della Pella-gra. Del Dr. C. LOMBROSO, Professore di Clinica delle Malattie Mentali. Bologna, 1869. Pp. 376.

Clinical and Experimental Studies on the Nature, Cause and Treatment of Pella-gra. By Dr. C. LOMBROSO, Clinical Professor of Mental Diseases.

Those who read the Italian Retrospect in the last number of this Journal, may, perhaps, remember that Professor Lombroso's book was

reserved for a separate examination. Mere excellence of treatment would hardly have led us to ask for further room in reviewing a work which deals with a disease happily unknown in England, and therefore of no practical importance.

Such was our idea on taking up this book; we had a somewhat vague notion that pellagra was a disease produced by mal-nutrition, combined with dirt and malarial miasmata, and that the symptoms of insanity, which frequently occurred, were of a very indefinite character. We soon perceived that Dr. Lombroso had completely proved pellagra to be a well defined disease, produced by a special poison, and that the mental phenomena, which are part of its complete evolution, are very interesting in themselves, and still more important as contributing another instance to the comparison of insanity with other diseases, which is such a promising branch of study.

We do not propose to give a full account of Professor Lombroso's work, but merely to sketch very briefly his conclusions, and to dwell only upon those points which would have a more particular interest for our readers.

The disease is now clearly proved to be due to the use of Indian corn as an article of food, as was long ago suspected from its being unknown in countries where maize is not eaten; but its being limited to such a comparatively small extent of the maize-eating countries, is evidence that some diseased condition of the seed must occasion it. We may put aside the *smut*, since maize so affected is never gathered, the "*Sporisorium maidis*" or "verdigris," which is much too rare to have any practical importance, and the "*sclerotium*," which is peculiar to Peru and Bolivia, although each of these is interesting from the poisonous effects it produces. The commonest alteration of maize is fermentation, from storing in damp places, with development of the *penicilium glaucum*. Dr. Lombroso has applied the following crucial tests which show, beyond a doubt, that this is the poison producing pellagra. He prepared a tincture of this substance, and administered it to 12 healthy people, in 10 of whom symptoms identical with those of pellagra occurred. One of the earliest results of the use of this tincture is increased appetite and power of digestion; this seems to be due to a curious property which the maize has of increasing the dissolving power of the gastric juice. To six other persons the maize was administered in powder, and the same series of symptoms were produced. Our author further establishes that not the penicillium, but the altered maize itself, is the active agent: and that this can be completely destroyed by boiling in lime water, and then roasting in an oven.

The symptoms vary in different parts of Italy, and Lombroso has therefore taken care to observe it in the several places where it is most common. He has studied in all 472 cases, and classes them under the following varieties:—

The worst, and rarest, is a rapidly progressing urinæmia, depending

upon atrophy or degeneration of the kidneys; in another class of cases, rapid and extraordinary emaciation occurs; in others irritation of the urinary, genital, or digestive organs is the most prominent symptom. Among skin-affections, patches of chloasma and maculæ seem to be the earliest; sometimes the whole surface of the body becomes darkened; erythema, herpes, and eczema are also observed; but all of these are not so common as most persons who merely read of pellagra in books might suppose.

To proceed to what interests us more nearly; in many cases the nervous system is the chief sufferer. Sometimes, without any other morbid symptoms, patients suffer from constant vertigo, and considerable muscular weakness. Other motor symptoms are rare, but partial chorea, tendency to run forwards in a straight line, or to execute violent muscular contractions, have all been occasionally noticed in patients suffering from other cerebral or spinal symptoms. Epileptiform convulsions, common in the Milanese provinces, are rare elsewhere; tremor, like that of old age, is sometimes observed, and in a few patients paraplegia has been seen. In four cases Lombroso noted difficulty of speech, as in general paralysis. Almost all these grave symptoms occurred in apparently well-nourished persons.

The sensibility of the skin to painful impressions, as tested by means of Ruhmkorff's induction-coil, is less than in health, particularly in the palms, forehead and nucha. Among subjective sensations, the commonest by far is a feeling of heat or scalding in the hands and feet, sometimes over the whole body. This persists through the entire course of the disease; pruritus is very frequently complained of, and sometimes formication or numbness. The commonest neuralgia is violent headache, which is increased by heat or by standing, and is generally unilateral, sometimes accompanied by heat of the face and dilatation of the pupil on the same side.

Deafness, especially of one side, is common; but the only one of the organs of special sense which is particularly affected is the eye. The ocular symptoms, as will be seen, are very similar to those observed in general paralysis, which they resemble also in being generally unilateral. One eyebrow or eye very frequently seems lower than the other, and ptosis is not uncommon. In 28 cases the pupils were notably unequal, the right being almost invariably the larger; in 74 cases the pupils were dilated; in 28 contracted, these last being almost all old people. Injection of one conjuncture, and pterygion, generally on the right side, are noticed; muscæ volitantes, diplopia, and photophobia are very common.

The ophthalmoscope shows evidences of retinal disease in about two-thirds of cases; in the early stages the vessels appear to be varicose and tortuous, in the latter, atrophy and anæmia of the papilla occur. Insomnia is not uncommon, while occasionally the opposite state, somnolence, is noticed.

We must dwell at greater length upon the character of *pellagrous*

insanity, and here we cannot do better than quote Professor Lombroso's own words:—

“It seems to me that one characteristic of many suffering from pellagra—even if sane, and still more if insane—is a greater moral impressionability; a slight insult, the threatening of some trivial danger, completely carries them away, although they, perhaps, appeared before to be of sound mind. For example, a woman believes herself to be lost, because she has missed mass; another person is in despair and goes mad, because he has lent a pistol to a friend, who will not return it; a woman hears her companions laughing at her dress, and becomes insane from grief; another, merely because her husband, a fisherman, is a few minutes late, breaks out into violent mania.

“This character is common to pellagra, alcoholism, and the early stage of general paralysis, and obeys the law, that the weaker an organ is, the more readily does it suffer and become irritated. This is, perhaps, one reason why the public, which does not go beyond the first appearances, frequently believes that pellagra is producible by moral causes.

“Perversion of the affections is rare; on the contrary, I have more frequently noted their exaggeration; so that on this side again our patients resemble those suffering from general paralysis, who are almost always very affectionate towards their relations. Many of them complain of loss of memory, and of mental weakness, which ceases when they are in bed or lying down. In a few cases, on the other hand, I have observed that the disease itself, as is occasionally also remarked in ordinary insanity, quickens the mental faculties; this reminds me that several of the persons upon whom I experimented with the damaged Indian corn spoke of their increased clearness of mind.”

Occasionally ordinary melancholia, more rarely monomania, occurs in these patients. Several examples of these forms are given by our author; but he agrees with Verga that probably such are cases of ordinary insanity grafted upon pellagra, as those who are most liable to pellagra—the pariahs of Lombardy—are also most exposed to all those causes of insanity which we know too well among our own poor.

“As a rule, even when the insanity of pellagra assumes a type, it approaches rather that of systematic delirium [qy. dementia] than of monomania; for instance—one of these patients finds it necessary to give one a card every moment, without knowing why; they will try to conceal their names from one, or say that they are engineers, or possess landed property, though perhaps confessing at the same time that they are drovers, or asking for an alms.”

A real or apparent stupidity, an obstinate mutism, is tolerably common, which is ingeniously termed by Lombroso “a psychical catalepsy,” seeing that the various faculties are there, and that some accident will frequently rouse such persons from their lethargy. Occa-

sionally the opposite extreme of gaiety and great activity may be observed; or there may be an almost intolerable repetition of some phrase, cry, or chant. Mistaken use of words and aphasia have not been noted; there is occasionally some uncertainty of speech.

Many patients complain of hallucinations, evidently connected with morbid visceral states. "They are on fire; they have dogs in their stomach; they see water everywhere; they hear voices; they are dead." But, as a rule, their insanity is of "a misty, ill-defined, contradictory character, like that produced by old age or by anæmia, and differing in this point from general paralysis."

Refusal of food is a particularly common symptom, and is traceable to the various causes with which we are all familiar:—disordered states of the alimentary canal, the influence of real delusions, or mere obstinacy.

The most characteristic symptoms are those grouped by Italian physicians under the term "*hydromania*." Lombroso's analysis, which shows great subtlety and skill, decomposes this very curious group of phenomena into the results of several different causes.

In one set of cases water is sought and desired, because of the relief which a cold bath gives to the general feeling of heat and scalding. In other patients, the love of water seems to be dependent on the great pleasure which is derived from seeing its shining surface; something analogous is to be observed in young children and in demented patients. Thus, Dr. Lombroso quotes one patient as saying to him, "Nothing in the world pleases me so much as a small brook or pond; when I am walking and see any water, I cannot take my eyes off it as long as it is in sight, and at night I dream of seeing water." Such patients are often equally fond of the sight of fire, and will burn furniture or other things, in order to gratify themselves with a blaze.

Sometimes, on the other hand, there is a profound dislike for the sight or touch of water, which is not always explicable, but has been traced by our author in many instances to vertigo, produced by the sight of water or any other shining object in movement. Statistics also show that deaths by drowning are much more frequent in the provinces where pellagra exists, than in those where it is unknown or rare; in Lombardy and the Emilia, about 50 per cent. of suicides are by drowning, while in Central and Southern Italy the proportion is extremely small. This appears to be due either to a particular liking for water, or to giddiness coming on while the patient is taking a bath to relieve some of the symptoms of his disease.

The intermittence of the mental symptoms of pellagra is very remarkable. Acute phenomena are very rare in the colder months of the year, and become much more numerous in March, and continue to increase until August, when they diminish in frequency until October, when there is again a slight increase. Our author remarks that two sets of climatic influences are here at work; rapid barometrical changes, which seem

particularly active in autumn, and mere elevation of temperature, which is the cause of increase in spring. This is a subject unfortunately too little studied by asylum physicians, though everyone must have noticed that rapid falls of the barometer and elevation of temperature have an effect in exciting certain chronic patients; but Dr. Lombroso is able to adduce observations of alcoholism in cold climates, which show that attacks of delirium tremens are far more frequent in spring than at any other time. He ascribes this effect of warmth either to the diminution of the phosphates in the blood, or to the action of warmth in diminishing the muscular tonus of the capillaries, as has been recently observed by Wolf.

We need not dwell at any great length on the pathological changes observed after death. The dura mater is frequently thickened, the pia mater opaque and congested; the cerebrum was found to be œdematous and softened in one-third of the autopsies, the softening being always most notable in the neighbourhood of the fornix; in one sixth of the cases the cortical gray matter was atrophied, the weight of the brain being also less than it should be. The principal microscopical phenomena are deposition of pigment or fat around the cerebral capillaries; sometimes calcareous degeneration or ectasis of the vessels, abundant pigmentation of the sympathetic ganglionic nerve-cells; finally, the usual results of all chronic diseases destructive of nerve-tissue.

The other organs of the body which are affected by hyperæmia or inflammation in an early stage, and by atrophy in a later, are the colon, uterus and ovaries, heart, kidneys, liver, and spleen; also the various morbid changes in the skin, of which we may spare the details to our readers. A point of more particular interest to them is that, in 19 out of 46 post-mortems, the ribs were found to be particularly fragile, many of these persons with fragile ribs being neither old nor emaciated; the same thing has been more rarely noticed in other bones.

Professor Lombroso is inclined to ascribe most of these morbid changes to local vaso-motor pareses, which he supposes to be produced by affection of the nerve cells of the sympathetic ganglia. (It is worthy of note that he has once found pigmentation of the ganglia limited to the solar plexus) Be this as it may, every one will at once see the interest attaching to a disease which, in its mental characteristics, stands between alcoholism and general paralysis, but nearer on the whole to the latter, and which is produced by the slow action of an organic poison.

Dr. Lombroso goes at great length into the prophylaxis of pellagra, in which we need not follow him; the results of treatment are much more interesting to us, and are the more valuable that the evidences of his great care make one confide thoroughly in their reality; he gives, moreover, the details of a very large number of cases, by means of which his statements can be tested.

The acute urinæmic form of the disease ("pellagrous typhus") has

proved rebellious to every treatment except the use of the sulphites of soda or lime, which were only lately recommended to our author by the physicians of the hospital at Vicenza, and which have, apparently, cured two out of three patients to whom they were administered.

For the chronic varieties of pellagra the most valuable remedy is arsenic, which cures almost invariably if given sufficiently early in the disease. Cases of pellagrous insanity, of several years' duration, have been cured after the administration of arsenic for some months. Refusal of food, which is often a prominent psychical symptom, is particularly amenable to this treatment, which generally fails (as might be expected) in cases where the mental disease assumes the "systematic" forms of chronic mania or melancholia. Opium cured two patients who were acutely melancholic in a very short time; while acetate of lead is of particular service where tremors and commencing paralysis are prominent symptoms. The class of patients whose growth and development is so remarkably checked by the influence of pellagra in early life are greatly relieved, if not cured, by friction with common salt; this treatment seems to improve not only the stunted condition of body, but also the feeble state of mind verging upon idiocy, which is peculiar to them. Iron, a favourite remedy for pellagra with most Italian physicians, has never done any good in our author's hands, and has frequently seemed to be injurious; he has given a patient and prolonged trial to cod-liver oil, iodine, and sulphur, but without reaping any advantage.

We need hardly call our readers' attention to the importance of these details of the treatment of a disease which has definite bodily and mental symptoms, considering the imperfect state of our knowledge of the therapeutics of insanity. The use of opium in melancholia is known to everyone, and some of us may have observed the good effects of arsenic in insane patients who refuse their food; but that insanity of ten or twelve years' duration should be curable by any means of treatment is one of those gleams of hope which we sorely need to prevent our sinking into mere speculative observers of disease which we do not attempt to do more than palliate.

As Professor Lombroso's work is written in a language unfortunately not understood by most of our readers it was the more necessary for the reviewer to examine it with great care, so as to satisfy himself thoroughly as to its trustworthiness. This he has done to the best of his ability, and he only regrets that he should be able to give his readers no adequate idea of the ability and completeness with which the whole subject has been treated. It is one proof, among many, that the countrymen of Morgagni and Baglivi have at this day worthy successors among them to the great physicians who have made their schools so illustrious in days gone by.

2. *French Psychological Literature.*

By J. R. GASQUET, M.B. Lond.

Considering the history of France for the last eighteen months, there would have been little reason for surprise if our brethren there had entirely ceased to contribute their share to the literature of psychological medicine. They have, however, continued to write and to publish, although three numbers of the "*Annales*" were published during the siege of Paris, and one under the reign of the Commune, when Paris was cut off from the rest of the world. The "*Journal de Médecine Mentale*" seems to have been more unfortunate, as only one number was published for the last four months of 1870, since which we have received no more.

It will be seen that the contents of these Journals are little, if at all, below the average in real interest and importance.

Perhaps the most practically useful paper is one by M. Jules Falret, "*On the Use of Bromide of Potassium in Epilepsy.*" He gives the results of his treatment at Bicêtre during the years 1867-70, where he treated, almost invariably, confirmed cases where the disease was of long standing. He begins by giving 15 grains a day, very gradually increased until the dose of one drachm is reached. This usually diminishes the number of attacks, and is then persisted with; if not, the quantity is again increased, every week or fortnight, until eight scruples, or two drachms, are taken daily. If considerable improvement results, and if no bad consequences are observed, this dose is continued for one or two years, and then gradually brought down to the original dose of 15 grains. He attaches great importance to the slowness with which the dose is increased and diminished; and ascribes most failures to suddenly leaving off the medicine. By this treatment he states that he has cured one-seventh of his cases, greatly improved three-sevenths, and failed with the remainder. Attacks of maniacal violence proved most amenable to treatment; next in order came nocturnal fits, then diurnal; vertigo and the "*petit mal*" being most difficult of cure, these last sometimes taking the place of ordinary fits under treatment. An acneiform eruption on the face, shoulders, and back is generally observed as soon as the daily dose of one drachm is reached; when it is not produced, M. Falret usually finds that the bromide does no good—it sometimes becomes so annoying as to prevent treatment being continued. Considerable loss of mental power and other cerebral symptoms, of course, indicate an immediate suspension of the remedy; they seem to M. Falret more frequent in private practice than at Bicêtre. One patient died very suddenly, while taking only moderate doses of the bromide; the author analysed the viscera and found considerable accumulation of the salt in the brain and liver.

This paper was read before the Société Médico-Psychologique, and

gave rise to two very interesting discussions, of which only the most salient points can be given here.

M. Morel looked upon the doses given as "fearful;" he has himself rarely given more than two scruples or one drachm daily.

M. Legrand du Saulle, on the contrary, stated that he saw no danger in such large doses, provided they were only arrived at very slowly: his full dose is two drachms and a half daily, which he only attains after several months' treatment. With this precaution, he has never seen any evil results, not even emaciation. He believes, however, that such large doses are only needed for men, and that women are sufficiently acted upon by half a drachm to one drachm daily. He has treated 138 cases in all, cured 10 of these, greatly improved 19, improved 45, and failed in 64. He prefers the bromide of sodium for chorea, hysteria, hemicrania, and the early stages of melancholia; and the bromide of ammonium in all forms of cerebral congestion; he has seen it relieve symptoms of this kind in general paralysis with great rapidity.

M. Voisin, who was the originator of this graduated method of administering the bromide, read a long critique upon M. J. Falret's paper. Besides acne simplex and indurata, he has observed another eruption of specific character in persons taking the salt. This consists of patches of confluent acne pustules, generally on the calves of the legs, which end by producing adherent scabs, and sometimes ulcers difficult to heal. He shows by figures that the occurrence of skin eruptions is no evidence of a favourable action of the remedy, which he looks for in some sign that it is acting on the medulla oblongata. This he finds by titillating the pharynx nares and epiglottis, and observing whether the reflex acts of nausea, sneezing, and coughing are produced. As soon as they cease, he considers the medicine to be producing its physiological action, and, therefore, to be acting beneficially upon the disease. He dwelt at some length on the various phenomena of bromism (among which he has once seen acute mania), and urged that no patient should be allowed to take more than one drachm of the bromide daily, without being frequently examined by his physician. Of 41 cases (generally of confirmed epilepsy) treated by M. Voisin, 17 have had no attack for five years, 20 are improved, and four remain in the same state. No one seems to have questioned the efficacy of the bromide during these two meetings, but, since then, M. Delasiauve and a few men of less note have expressed doubts as to its curative action in confirmed epilepsy, and have seen increased violence of attacks follow its suspension. What would they have said, had they known that Binz and other Germans totally deny that the bromides have any different action from the chlorides of the same bases?

A very interesting case of *transitory insanity* is recorded by Dr. Chatelain. A gentleman, 65 years of age, frequently complained of moments of depression and gloom, his intelligence being completely unimpaired and his bodily health unaffected, with the exceptions of

some "precordial anxiety" and considerable redness of the face at the moments of depression. This state lasted about two months, when, during a sudden access of melancholy, he walked into a large pond, sat for some moments on a stone in it, drank some water from the hollow of his hand, and finally got off the stone and let himself sink. Fortunately he was observed by some friends, who rescued him. When restored to consciousness he was much surprised to find himself in bed, and had no recollection of what had passed; he had never had any intention of committing suicide, nor had it been suggested to him by any voices or internal impulse of which he was conscious; his mind was simply a blank from the moment of starting to go to the lake until he found himself in bed more than an hour afterwards. Dr. Chatelain advised him to travel, and five months after the attack saw him again, when he learned that he had never had any return of his moments of melancholy. The attack was evidently, as the author states, one of true "*raptus melancholicus*;" and had the act committed been homicidal instead of suicidal, it would have been difficult for any expert to have established the irresponsibility of the patient. A second case is recorded by Dr. Chatelain, which we do not give, as it appears to us doubtful, and we cannot afford the space needed for its examination.

The same author also relates a case of *insanity in a little girl under five years of age*, who at the moment of the appearance of measles was much frightened by some firemen. She became "*distracte*," appeared to be listening from time to time to some unknown voice, answered questions wrongly, usually introducing into the replies the name of some friend, or some idea which occupied her for one or two days; and she manifested none of the usual timidity or curiosity of children, seeming always perfectly calm. Her bodily health was good, no evidence could be discovered of masturbation or of any inherited insane taint, and the only other phenomena noted were the occasional passage of a lumbricus and a slight intermittence of the pulse. She recovered in a few weeks, after several variations in her mental state; no treatment was adopted.

M. Brown-Séquard has published some interesting experiments on the *artificial production of epilepsy* in guinea pigs. These are in continuation of the experiments which he performed by mutilating the spinal cord; and he now finds that division of the sciatic nerve or of its principal branch, the internal popliteal, produces the same results. In a few days after the operation it is found that irritation of a certain portion of the skin brings on various clonic and tonic spasms, and finally an attack of true epilepsy. The skin thus affected is an oval space on the same side of the body as the mutilation, and is bounded by a line connecting the following points: the anterior palpebral angle, the projection of the upper jaw bone, the centre of the inferior maxilla, the scapulo-humeral articulation, the middle of the anterior edge of the scapula, the lobe of the ear, and so back to the starting-

point. At the same time this "zone épileptogène" loses its power of sensation, lice accumulate in it, &c.

We have as yet but little information as to the *influence of late events in France* upon the amount and character of insanity in that country. An interesting discussion took place at the Société Médico-Psychologique, during the reign of the Commune, from which it would appear that the Breton Mobiles who were in Paris during the siege suffered in a large proportion from *nostalgia*, of which the principal symptoms were obstinate silence, refusal of food, and death from asthenia. Some benefit was obtained by associating them together, but it was often unsuccessful. All the members agreed that delirium had been particularly common in cases of acute disease during the siege of Paris. MM. Legrand du Saulle and Brochin found an exception in hæmorrhagic variola, when the mind seemed always perfectly clear; while in ordinary variola delirium generally existed. The objects of delirium seemed to be always connected with the military events which were occurring, and recently contracted habits of drinking, as well as the depressing circumstances under which the Parisians lived, were assigned as its true causes.

Political matters are only touched upon by *M. Brierre de Boismont*, who introduces them into an examination of the question of mechanical restraint. He is of opinion that a large number of the persons who are now styled "les Communeux" were insane, and gives details in support of this statement. The only one recognizable is Lullier, who was actually put into confinement as a madman by his own party, but some of the details given as to the other leaders of the Commune are curious. One used to fall into a kind of ecstasy; a second considered that, by means of magnetism, he could compel M. Thiers to retire from power, and so forth. M. Brierre de Boismont considers that, for the reception of such persons, criminal lunatic asylums should be erected in France, on the model of Broadmoor, "whither all persons putting forward subversive theories should be immediately conducted and subjected to mechanical restraint when exacerbations occurred, when they threatened others or attempted to escape."

Before the declaration of war a bill had been introduced into the Corps Législatif by M. Gambetta, with the object of amending the present state of the law, which he considered gave undue facilities for the placing persons in asylums. Subsequent events prevented the passing of the bill, but the government of September named a Commission to examine into the subject and report.

The great asylums in the neighbourhood of Paris seem to have been less affected by the two sieges than might have been supposed. Charenton remained unmolested, and received patients from the other houses (Passy, Ivry, Vanves), which were obliged to be closed for the time.

The "Bureaux des Aliénés," in the Prefecture of Police, and all the papers connected with them, perished in the fire of Paris; and sundry

changes were made in the *personnel* of the French asylums by the government of September and the Commune; but have been since annulled.

We are promised further details in future numbers of the *Annales* on the effect of the war on the numbers of the insane and the character of their insanity; we shall look forward to these with great interest. We hope that we may also be informed of the influence of all the exciting events of the last twelvemonths upon such lunatics as may have been exposed to them.

Our readers will learn with regret that three eminent French physicians have died during the past twelvemonths. M. Longet was known chiefly for his writings on the anatomy and physiology of the nervous system; but the other two have done much to advance our branch of medicine. M. Falret, the elder, died in the South of France during the siege of Paris, so that his son, M. Jules Falret, only heard of his death some two months after it had occurred; his works were numerous and important, and he has perhaps done more than anyone else to encourage the clinical study of insanity as a part of medical education. M. Mitivié's name was less well known in England and will probably be remembered only in connection with a paper on the pulse in insanity; but he was much esteemed in France, both as a nephew of the great Esquirol and as a careful physician at the Salpêtrière and at Ivry. He had attained a great age, and died during the bombardment of Paris by the Prussians, which apparently hastened his end. Both he and M. Falret founded prizes for the encouragement of the study of insanity, thus continuing the good work to which they had devoted their lives, and they died—"felices opportunitate mortis"—without witnessing the greatest misfortunes of their country and its capital.

3. A Medico-legal Case.

Reduction of Will.—George Pagan v. Janet Pagan or Ford and Others.
Abstract of the Case, with Remarks. By T. W. McDOWALL,
M.D., Assistant Physician, Inverness District Asylum.

When this case first appeared in the Court of Session, Edinburgh, in March last, it excited much attention among the general public, and it formed a frequent subject of discussion among members of the medical and legal professions. The progress of the suit was watched with much interest; the evidence led was carefully weighed; the opinions of the medical experts were freely criticised; the charge of the judge gave the utmost satisfaction to some, while the verdict of the jury equally delighted those who held a contrary opinion. The case presents many points of interest for those engaged in the study

and treatment of mental diseases, but any remarks to be made on the points which demand special notice will be given after an abstract of the evidence has been presented to the reader. It may be remarked that the evidence was very voluminous, and that while every effort has been made to make the present abstract as short as possible, care has been taken to avoid obscurity, and no really important piece of evidence has been omitted for the sake of brevity. It must also be added that this account of the case has been made up from the reports of the proceedings which appeared in the "Scotsman."

In this case, the pursuer was George Hair Pagan, banker and writer, Cupar-Fife, eldest son and heir in general to the deceased William Pagan, banker and writer, Cupar-Fife. The defenders were Mrs. Janet Pagan or Ford, wife of John Ford, farmer; the said John Ford; the children of the said John Ford and Janet Pagan or Ford; and Miss Mary Cunningham Findlay, Glasgow.

From the statements lodged in the case, it appears that the deceased William Pagan was proprietor of Clayton, near Cupar, and of Curriestanes and other lands near Dumfries. He was born on 6th May, 1803, and died on 21st December, 1869; his wife died in 1866; the following children, other than the pursuer, still survive: Mary Pagan, wife of Dr. James W. R. Mackie; Barbara Hair Pagan, who is unmarried; and Janet Pagan, wife of said John Ford. The said William Pagan carried on business as a writer for fully forty years; he was a man of superior abilities, and devoted his attention to road reform, &c. The pursuer entered into partnership with his father in 1848. His interest was small, but this pursuer submitted to in consequence of being led by his father to look forward to succeeding to the landed estates. In August, 1867, the deceased executed a will in pursuer's favour, conveying to him his lands at Cupar and in Dumfriesshire, and generally his whole means and estate, under payment of certain provisions and legacies. This disposition was afterwards destroyed by deceased. The deed sought to be reduced appoints John Pitcairn, Esq., Allan Cunningham Pagan, the deceased's brother, the pursuer, and Dr. Mackie, as trustees. The beneficiaries under it are the deceased's three daughters to the amount of £3000 each; his grandson Andrew Wallace Mackie, £1000; two children of Mr Ford, £500 each; and Miss Mary Cunningham Findlay, Glasgow, 500 guineas. Subject to these amounts, and to payment of legacies said to be specified in a letter of instructions, and debts, deathbed and funeral expenses, the residue is, by the said pretended deed, bequeathed to the pursuer. After his wife's death—the pursuer alleges—the deceased began to fail somewhat, though not noticeably, both in body and mind. For eight months, or thereby, before his death, he was of unsound mind. In addition to various bodily diseases which developed themselves in succession, and under one of which he had laboured for many years, his intellectual faculties gave way, and he ceased to be of sound disposing mind. His disease manifested itself in loss of memory, hesi-

tancy and thickness of speech, short pauses in his talk, as if an instant or two of unconsciousness had supervened, violent fits of anger, profane swearing, boasting, unfounded suspicions, delusions, charges of conspiracy, and the like. He groundlessly supposed that the pursuer was concerned in one of the imagined conspiracies, and threatened that the pursuer would suffer for it. About this time the deceased's conduct towards the pursuer became completely altered. Towards Miss Pagan, also, his conduct entirely changed; and instead of the affection and gratitude which he previously displayed in return for her devotion to him, he treated her with harshness and indignity, charging her with being engaged in supposed conspiracies against him. In consequence of his insanity and delusions, he executed the deed of which reduction is sought; it is dated 16th June, 1869, by the deceased. On that day he was insane, and was not of sound disposing mind; he had been of unsound mind for some time previously, and he never recovered his sanity. The deed in question is not in law his deed; it does not embody the intentions which he entertained and cherished when in sound bodily and mental health; its provisions are injurious to pursuer. The insanity of deceased was well known to his family, and was, during the progress of his illness, the subject of conferences among them. In particular, it was well known to the defender, Dr. Mackie, his medical attendant, who took part in these conferences, and who consulted with the pursuer and his sister Barbara, on the footing and expressed understanding that their father was insane. The fact was also noticed by others with whom he came in contact. Had he been of sound mind, he would not have executed the deed now challenged.

The issue sent to trial was—

Whether the deed, No. 12 in process, is not the deed of the deceased William Pagan?

Mr. Campbell Smith, for the pursuer, stated that Miss Findlay, one of the defenders, was one of five young ladies—younger than his own daughters—to whom Mr. Pagan proposed marriage after his wife's death, and who was herself in possession of a fortune of £500 a-year.

The following evidence was led:—

George Hair Pagan, the pursuer, in his examination, gave details concerning his father's abilities in business, his settlements and other matters already given in statement. He continued:—My second marriage took place in 1862; my father was present at it, and Miss Findlay was one of my wife's bridesmaids. She again visited us in 1866, at which time my father was at home. In September, 1866, I came to know that for some time my father had corresponded with Miss Findlay. One day during September, when walking with me in the street, he fell down at my side. He was carried into my house, and medical aid sent for. They told me he had heart disease. In April he went to Bridge of Allan, to recruit, having greatly fallen off; but he returned

much fatigued, and worse than ever. He was not so attentive to business as he should have been ; there was some difficulty in getting him to move in any matter, and occasionally he had to write letters to my dictation. My sister, Mrs. Mackie, afterwards told me something about him which struck me very much, and caused me much uneasiness. I had several conversations with Dr. Mackie about his state of health and mental condition. On 7th June, concerning some alterations in bank, he was utterly impracticable and unreasonable—most unlike his previous self. At that time he also told me he was ill-pleased with my wife for conspiring to thwart him in regard to the visit of Miss Findlay to Clayton. I said I heard he was complaining, but did not understand what he was complaining about. “Oh !” he said, “I’m not going to lodge a special condescendence ; but there is a conspiracy. Your wife may not be deeper in it than you, but she’s very near the bottom of it. A conspiracy is going on in Clayton, in the streets of Cupar—in the Mill-gate and the Bonny-gate. I have got a letter from your wife which proves it.” I told him he was misjudging us all ; whereupon he broke out into a tirade, calling us all shallow-pated fools. He said he could have gone and visited the lady, and that he wished he had married somebody to defend himself against such machinations. While this was said, he sat feebly, with his hands resting on his knees, looking towards the door ; he would not face me. He gesticulated as he spoke ; he clenched his fists, and was very much excited. This sort of demeanour was quite new, as contrasted with his previous bearing. On 8th June, Mr. Bell, a client, told me that my father was in his dotage. Next day I consulted Dr. Mackie, and he told me that what the client had said was quite true. It was resolved that he should be kept from coming into Cupar. He was never in the office again ; he died on 21st December, 1869. On 10th June, 1869, he sent for a clerk, who told me that he was drawing out a skeleton settlement. My father did not tell me he was doing so, or consult with me as before. Another clerk was with him on the 16th. I visited him frequently at Clayton before his death ; my wife also went occasionally ; we were both well received. My father took no interest then in the business, beyond seeming pleased when I told him the firm had been successful in any litigation. His memory had failed him, and his demeanour towards Barbara had completely changed ; he treated her with great harshness. It was proposed that there should be a consultation with medical men from Edinburgh, but Dr. Mackie said it would be of no use. The possibility of requiring to send my father to an asylum was discussed in the family. Mr. Hodgson was formerly a great friend of my father, and was often at Clayton ; but my father took a dislike to him too, and said he was not to come any more. There was no rational reason for the change. He afterwards complained that Mr. Hodgson had not come to see him. His handwriting, too, became very shaky. I recollect of him writing out an order upon the bank without filling in a sum.

The Lord Justice-General—I hope that is no sign of insanity. I have done the same thing myself.

Witness, resuming, said that his father had never made such a mistake before. His inability to walk became more marked; he had a general paralytic appearance, and his speech was affected.

Cross-examined by the Solicitor-General—My wife wrote a letter to Miss Findlay on 10th April, 1869; that is the letter I referred to to my father as a kind letter. That letter does not prove a conspiracy; and he was angry about a letter which proved a conspiracy. The letters I dictated to him referred to subjects of which I was more cognisant than he was. My father fancied he had great mental and material resources—at least, so Dr. Mackie told me. The doctor told me he said he could go away from the business for ever to the lady at Springfield. I believe that he would sooner, if he had been in his senses, have put his hand in the fire than have empowered the properties, which he seemed anxious all along to retain in the family, to be sold.

Barbara Hair Pagan deponed—I am the second daughter of the late Mr. Pagan. I recollect of a Miss Watson dining with us at Clayton, in February, 1869. I was much surprised and affronted by my father on that occasion. He threw several articles of ladies' work at Miss Watson. He was not at all under the influence of drink at the time. I never saw him do such a thing before. When at Dalmeny, he spoke and scolded when there was no one to listen to him. His tailor came to him when he was in Edinburgh after leaving Dalmeny, and he was so cross with him, that the man spoke to me on the subject. I remember his leaving the North British Hotel for the purpose of going to a shop in St. Andrew Street and buying a present for a lady. On getting into the street, he suddenly forgot where he was going. That same night he swore at me. My room was next his in the hotel that night, and I heard him swearing and scolding while he was alone in the apartment. The same thing occurred next morning. From that time forth it was not easy to live with him at home as it was formerly. I could do nothing to please him. He was irritable, and changed his wish very frequently. He swore very much at me and the servants. He was not in the habit of swearing at anybody before. He frequently forgot the names of common things—such as the primrose. He seemed particularly displeased with my brother George, the Mackies, Mr. Ford, and myself.

The witness was cross-examined by the Solicitor-General on many points of detail, her replies being confirmatory of evidence already given. Witness said the articles he threw at Miss Watson in February, 1869, were some balls of wool or cotton, which he found on the table. They were thrown with force enough to carry them across the table and to strike Miss Watson. He afterwards took up a pair of scissors, also apparently with the view of throwing them at the lady. I told him to desist, and he did not throw the scissors. The correspondence between my father and Miss Findlay annoyed the whole

family, which fact reached Miss Findlay, who wrote Mr. Pagan on the subject, and this letter was the cause of the first unpleasant interview between my father and me. He was particularly incensed at the following passage:—"From what I heard at Thornton Hall I would be no welcome visitor in your quarter." He asked me what it meant, and being informed that his correspondence and proposed marriage with Miss Findlay had been the subject of some conversation, he became unreasonably incensed, and abused his relatives, saying many things which appeared to me unjust and hard to bear. Next day he told me that I had been an ungrateful daughter, and that as soon as I could get another place I might go. He on one occasion said that the Osbornes at Thornton Hall had made a fool of him, and that Mrs. George Pagan had laughed at him, which was not true. It was in May, 1869, after the unpleasant interview, that I formed the opinion my father was insane. I now thought him insane because of his unreasonable conduct to me at our interviews and afterwards. Witness corroborated some points already given, and proceeded—I was not aware during his lifetime that he had proposed marriage to other young ladies. I was a little apprehensive of violence from him. The doctor said that if he struck me he must be shut up. I recollect his saying that his house would be broken into, and that we would be robbed and murdered; and he proposed to put iron bars on the windows, but that was not done.

Grace Margaret Pagan deponed—I am the only surviving child of Mr. George Pagan, the pursuer in this case, by his first marriage. I lived with my grandfather for many years; he was very kind to me until 1869, when his manner changed. Witness corroborated many statements of preceding witnesses. She could only account for the change in Mr. Pagan's conduct by believing him to be insane. She noticed that he was frail and had a vacant look; when cross, however, he looked very wild and excited. She heard him talking aloud when alone. He was often listless when among the family, and would sit for a long time without doing anything. He had sometimes difficulty in speaking, but that defect was not constant. He was more like himself when with strangers.

Jane Millroy gave evidence concerning Mr. Pagan throwing a worsted ball at Miss Watson, and Miss Pagan preventing him throwing a pair of scissors.

Allan Cunningham Pagan gave evidence of the same kind as had already been led, but the following statements may be noted:—While he was in Edinburgh he appointed to meet me at his hotel. I went, but he was late. I never saw him late in his life before. After coming out of the British Linen Company's Bank, he said, "Where are you taking me to?" After returning to the hotel we arranged to go to a shop near hand, but we no sooner got into the street than he asked, "Where are we going?" In July his condition was worse. Sometimes he carried on conversation as well as ever he did in his

life, but at other times he was absent and hesitating. I had a sister who died of softening of the brain. I was afraid he was similarly affected, and every time I saw him that impression was more confirmed. Dr. Mackie declined a consultation on the ground that he knew the case perfectly well himself. I noticed a peculiar expression about my brother's eyes; he apparently eyed me with suspicion. On the day of my brother's funeral I expressed my opinion that he had been unfit to make a will for a long time back.

Cross-examined by the Solicitor-General on various points of his evidence, witness said that he did not know what was meant by insane. The Lord President added—Nor anybody else. The witness then gave instances in which his brother behaved in an unreasonable and peculiar manner. One day in July or August, while driving in the carriage, he pulled up in a moment. When the man came round he forgot what he had to tell him, and he was angry at the man for stopping, and made him drive on. He was never of intemperate habits, but always a very sober man.

Mrs. Janet Shaw or Pagan, wife of last witness, visited the late Mr. Pagan in September, 1869. He was angry at her without cause, and gave her an exceedingly wild and angry look from the side of the eye. She also noticed a great change in his look. He occasionally stopped in his speech, as if he had lost what he had to say.

Charles Low, gardener at Clayton for four years, deponed that he observed a great change in Mr. Pagan after the visit to Bridge of Allan, and a further change for the worse after the visit to Edinburgh. The witness gave several instances of violent and unbecoming speech, peculiar orders, &c.; observed Mr. Pagan speaking to himself as he went about the garden. Witness formed the opinion, not long after return of his master from Bridge of Allan, that he sometimes was sensible and sometimes insane.

Helen Robertson, lately cook at Clayton, gave evidence as to the great change which occurred in Mr. Pagan, first noticed by her in May, 1869. Witness continued—I have noticed him pressing his hand to his head, and even pressing his head against the cold mantelpiece. One day, as I was giving him some lime-juice, he cried out that I was taking away half of it in the bottle, and swore at me. I had given him the whole of it. When we went in to prayers he used to appear absent, and did not notice us until Miss Pagan would say, "They're in." He seemed to be in a "brown study." The first thing I saw unreasonable about him was that he "flew up" because he had not got his medicine, although Miss Barbara told me he had got it. That and the incident of the lime-juice were the only instances of unreasonableness I saw.

Mrs. Jane Morrison deponed that Mr. and Miss B. Pagan visited her during 1869, and she noticed that he talked much about his properties, plans of which he carried with him. Witness thought him very childish.

Mrs. Margaret Findlater deponed—The Pagans were old friends of my family. My sister Janet lived with me at Kinghorn in July and August, 1868, and while we were there Mr. Pagan sent her a letter, conveying (in substance) an offer of marriage to her. We destroyed the letter, and paid no attention to it. When I visited him in the following Christmas he referred to the proposal of marriage, and asked if I had influenced my sister to reject it.

James Macrobie deponed—I was coachman with Mr. Pagan from 1868—1869. I got on very well with him up to Whitsunday, 1869, but after that I could not put up with him. He was always swearing and blaspheming—quite changed from what he had been. Sometimes when out driving, he would go on with his manœuvres, and was like to drive the carriage all to pieces. He went on siclike as if the devil was intil him. Sometimes he would tell me to stop at a certain place, and when I did so he would ask what the h—I was stopping there for? He was always “mad” to me. He was always angry, as if the devil was fechtig wi’ him. I am sure he was out of his mind. I remember he came into the stable with a staff in his hand, and shut the door behind him, and told me he would kill me on the spot. Once I saved him from drowning himself. He went down to the Eden and tied a handkerchief round each of his legs. He looked to see if anybody saw him, and then he sat down upon the edge of the bank and slipped forward. When I saw that I ran from a slip of wood where I had been keeping an eye upon him, and caught him by the cuff of the neck. I got him away up to the house. He took the handkerchiefs from his legs and put them in his pocket. He used to go up and down cracking to himself and making his manœuvres. There is a pond six or eight feet deep in the grounds. One day as I was passing, I saw him stand and look into it for a while, and then he sat down upon a rock stone and moved himself about till he very nearly touched the water. Whenever I saw that I took him by the coat neck and threw him back. I was afraid he would do some harm to himself.

David Foster, formerly clerk with Messrs. W. & G. Pagan, observed that Mr. Pagan, after his fall in the street, was always worse to deal with; he was markedly irritable and unreasonable on several occasions. Witness continued—One day when I was with him in the summer-house at the pond he asked me to take the cover off an ink-bottle which was on the table. I could not take the cover off easily, and he cursed and swore at me. He had a stick with him, and all of a sudden he gave me the stick, and said, “Kill that beast that is outside.” I could see no beast. He did not scold me, but seemed well pleased, and said, “Never mind.” I thought the beast was a delusion on his part, but it might have been a water-rat. He swore at me to a most outrageous extent also in February, 1869.

Adam McBain deponed that he used to write for Mr. Pagan, and found him very agreeable till towards the end of his life. On 16th

June, 1869, witness was employed by Mr. Pagan to extend three draughts, which matter was to be kept strictly private; and at that time noticed the failure in Mr. Pagan's memory, as evidenced by him requiring witness to read over several times a portion of one of the drafts which he had prepared himself. Witness, on subsequent occasions, noticed the failure of Mr. Pagan's power to dictate to him. His memory seemed to have failed him, and witness gave instances which had come under his notice. He continued—During a walk in November he asked me to take up and carry along with me a broken drain pipe which was on the road. I took it up to please him, and carried it some distance. At last I slipped it down, and then he commenced to swear at me. I took it up again, but he said "Give it me; I will carry it myself." He carried it to entrance of pond, put it behind the door, and said "That's the place for it." When within sound of the noise of the water in the fountain, he suddenly asked "What's that?" Witness gave several instances of peculiar conduct on the part of Mr. Pagan during the afternoon, and his behaviour was so disagreeable that witness did not return to Clayton, but sent another clerk.

John Bell, farmer, had known Mr. Pagan intimately for twenty-five years, and noticed a decided change in his mental powers during the last year of his life. On 8th June, 1869, witness called at Mr. Pagan's office on business, but found him childish, excited, confused, and inattentive. Witness continued—I next saw him on 19th July. He was quiet and listless; his features were dull and heavy; his under jaw had fallen somewhat; and when he spoke he did not express himself distinctly. He stopped in his sentences, made a halt and went on again. He got into a most unnecessary passion, and swore because some paper had been removed; rang the bell, and said to female servant who answered, "Clerk, clerk, paper."

Jane Primrose deponed—The late Mr. Pagan was a distant relation of mine. I visited him in September, 1867. One day he proposed marriage to me; I was taken by surprise; I did not accept him.

Janet Barclay deponed—I knew the late Mr. Pagan and his family. When at Kinghorn in 1868 I got a letter from Mr. Pagan proposing marriage. The proposal surprised me. I burned the letter and did not acknowledge it in any way. Afterwards, when playing at whist with Mr. Pagan, he told me that I should not have refused a good settlement.

William Drysdale deponed—I remember a letter coming some years ago from Mr. Pagan to my father or mother. He had been at my father's house some time before, where two sisters of mine live. In the letter, Mr. Pagan said he would like to have one of these young ladies for his wife. The letter was destroyed, and no notice taken of the communication.

Dr. James William Reid Mackie was next examined. Much of his evidence was similar to that already given, and therefore need not be

reproduced, but the following fragments may be given. Witness deponed—I am son-in-law of the late Mr. Pagan. I was his medical attendant from the time of my marriage. In September, 1868, he fainted in the street. I tested him, and found he had heart disease. On 18th May, 1869, having returned from Bridge of Allan in a worse condition than he went, he called at my house and saw my wife, who told me that he had charged her with conspiring to prevent Miss Findlay visiting Clayton. My wife had not, to my knowledge, been conspiring. She told me that Mr. Pagan was very excited when he called, but calmed before he left. I saw him professionally on his return from Edinburgh. He then complained of great lassitude and weakness. He had a sallow complexion, a thickly-furred tongue, and no relish for food. He said he was about as bad as a man could be. I considered that his liver and stomach were out of order. The witness then stated that on several occasions he had been spoken to concerning the mental state of Mr. Pagan. Witness continued—On 17th June I had a consultation with the pursuer, when I told him his father was insane. The pursuer told me that he had discovered that his father had made a settlement the day before; and that probably it would disinherit him. I said that if so it would not be worth the paper it was written on, as his father had had a delusion or delusions. This was an opinion based, not upon anything I saw myself, but upon what was told me by others. I saw nothing myself to indicate insanity. I also said that should Mr. Pagan become violent and strike Barbara, it would be necessary to send him to an asylum. Miss Pagan informed me that during his illness he expressed rather a high opinion of himself—that he was a great man with great resources. In July his speech was, for the first time, slightly affected; and I expressed to his son my opinion that this might be the first symptom of general paralysis, which may or may not be accompanied by insanity. I did not again observe a thickness in his speech until 12th September. I observed it sixteen times altogether within four months, but it never progressed in intensity, and was not accompanied, to my knowledge, by any other symptom of general paralysis. In such cases there is generally a delusion of unbounded means; but in this case Mr. Pagan estimated his means at less than they turned out to be. “Great resources,” the expression which Miss Barbara reported to me, is a comparative term. From swelling of the ankles and feet which commenced in the beginning of July, his walking was somewhat affected. Failure of memory is one of the concomitants of insanity resulting from general paralysis; but I did not observe any falling off in Mr. Pagan’s memory: on the contrary, I was astonished that at his age it was so good. His indistinct speech was, to a certain extent, caused by some loose teeth he had. Now and again he was in a great passion; and, altogether, he was more irritable after April, 1869, than he was before. I did not observe anything in his manner which could not be accounted for by weakness. The day after Mr. Pagan’s funeral I did not say that

he had been unfit to make a will; but believing, as I then did, that he had delusions, I think I stated that he was insane; this opinion was founded on what other people told me. There was no conspiracy going on in my house against my father-in-law; but I know now that he had some ground for supposing there was. I refer to a letter written by Mrs. George Pagan to Miss Findlay on 10th April, 1869, of which I was then ignorant. In October, 1868, I certainly advised Mrs. George to write to Miss Findlay in such terms that she would not come to Clayton.

The witness was cross- and re-examined. He stated that there was no indication of senile insanity about Mr. Pagan. The witness avoided speaking to Mr. Pagan concerning his proposed marriage to Miss Findlay, because he believed that the subject might excite him and cause apoplexy; he believed that the fainting fit in Cupar was caused by excitement, when he was about to tell his son of that matter.

Mrs. Mackie, wife of preceding witness, and eldest daughter of the deceased; and Mrs. George Pagan, wife of the pursuer, were the next witnesses, but nothing new was elicited during their examination.

William Hodgert, road surveyor, stated that he was struck with the conduct of Mr. Pagan at a road meeting, on 27th April, 1869. On that occasion Mr. Pagan talked to him so loudly and incessantly as to disturb the business. Witness had business with him on first Friday of May, when he was incoherent and spoke nonsense. Witness considered Mr. Pagan had gone wrong in his mind and expressed this opinion to next witness.

William Campbell, accountant to the British Linen Company, who stated that Mr. Pagan's temper became so bad that witness had thoughts of leaving his situation; in April, 1869, he considered Mr. Pagan's mind failing.

George Eadie, farmer, last saw Mr. Pagan in the spring of 1869. On that occasion Mr. P. began to tell him a story, and, during its narration he laughed very much; he was unintelligible, although he repeated the story three or four times; his speech was very thick and indistinct.

Allan Pagan was recalled, and deponed among other matters that Dr. Mackie had stated that deceased was a monomaniac, and that there was a difference between medical and legal insanity.

This closed the evidence for the pursuer.

Mr. Watson then opened the case for the defenders. There would, he said, be abundant evidence laid before the jury to show that although the late Mr. Pagan was enfeebled in body, and pained severely by a series of bodily ailments, he retained his mental powers unimpaired to the close of his life. Among other documents which would be brought forward would be a diary, which he kept with intelligence and punctuality till within a fortnight of his death. The learned counsel referred to the correspondence with Miss Findlay, and read several of the

letters. In one, dated 15th April, 1869, Miss Findlay wrote that she would not visit Clayton, as she believed her visit would be disagreeable to members of his family. To this Mr. Pagan replied that he was perplexed and disappointed; that the correspondence was known to the family and considered most innocent in all respects; that if she came she would be most welcome, and no attempt would be made to convert her to Paganism. Mr. Watson maintained that frequent proposals of marriage to young ladies was not a mark of insanity in an old man like Mr. Pagan; and that he was not possessed by insane delusions.

Witnesses were now examined for the defenders.

Robert S. Taylor, formerly sheriff-substitute for Fifeshire, had known Mr. Pagan for a long time; observed no incoherence nor anything indicating mental disease, only a gradual physical decay between June and October.

John Pitcairn, a proprietor in the neighbourhood, was asked by Mr. Pagan to be a trustee under a new settlement he was about to make. Witness never saw anything wrong, mentally, with Mr. Pagan, who spoke intelligently and distinctly on that and all other occasions.

The Rev. James Cochrane, on most intimate terms with Mr. Pagan, never observed anything to indicate that the deceased's mind had been affected. During October witness visited him twice, had religious conversation with him, and was pleased with his conduct and religious feeling.

The Rev. William Reid visited Mr. Pagan on 10th June, and never found him brighter or better in mind than on that day. Witness observed nothing to lead to the conclusion that Mr. Pagan was wrong in his mind.

The Rev. William McFarlane had, at one time, offended Mr. Pagan, which led to an estrangement between them for eight years; but witness, hearing of his illness, made overtures for a reconciliation. These were successful; Mr. P. remarked, however, that he considered that witness had interfered with him rashly and inconsiderately. Witness saw deceased in June, July, and November, but observed no symptoms of mental derangement.

Alexander Lawson, of Burnturk, saw no symptoms of mental derangement when he visited deceased in August, 1869. They conversed on business matters, &c.

Robt. Thompson, farmer, gave similar evidence.

Henry Todd, W.S., discussed with Mr. Pagan and other gentlemen, in May, 1869, a dispute about a road. The interview occupied nearly two hours, and witness did not observe anything incoherent in his conversation, or to suggest mental weakness.

David Curson, S.S.C., consulted Mr. Pagan in July on road reform, and found him even more acute on the subject than ever; not the slightest symptom of mental derangement observed.

The Rev. Robt. Johnstone saw deceased four or five times during the last six months of his life, and noticed no mental affection.

George Inglis gave similar evidence. He had observed him stop suddenly, as if he had forgotten what he was going to say, and then resume his discourse exactly where he left off, and proceed without interruption.

Walter Walker saw deceased in November, and noticed no mental failure. There might be a failure of memory for a minute; when telling a story he might stop for a moment, but he would always go on again.

Several other witnesses were examined; their evidence was of an entirely negative character, and disclosed nothing new or important.

The medical evidence on both sides was then proceeded with.

Dr. W. A. F. Browne, examined by the Dean of Faculty, deponed—I was for upwards of twenty years principal physician at the Crichton Lunatic Asylum, Dumfries, and was one of the Medical Commissioners of Lunacy for Scotland. I gave up these appointments in consequence of failing health. I have heard the evidence which bears upon the late Mr. Pagan's conduct, and I am of opinion that he was insane from the 27th of April up to the date of his death. The evidence describes him as being incoherent in speech, and as manifesting a difficulty in articulation, which are symptoms of mental disease. The next symptoms of insanity which struck me were his estrangement from his family, his irritability, his loss of general memory, his apparent loss of consciousness at times, and the supposed attempt to commit suicide. It is one of the characteristics of insanity for a person to dislike persons whom he liked formerly; and it is consistent with my observation that a person who is insane is quite capable of writing not only letters of a sensible and rational nature, but compositions of a graver character. Insane people are frequently able to keep accounts. The circumstance that Mr. Pagan was capable of writing apparently rational and sensible letters does not affect my opinion in reference to his insanity. It is quite compatible with my opinion of Mr. Pagan's insanity that he was able to receive strangers in his house and carry on conversation without their discovering his unsoundness.

Cross-examined by the Solicitor-General—There are various species of insanity existing without delusion of intellect.

By the Court—Was there delusion in the case of Mr. Pagan?—There was delusion. I include it among the minor symptoms of insanity which he exhibited. He misinterpreted and exaggerated many things.

By the Solicitor-General—Assuming there was no delusion of the intellect in the case of Mr. Pagan, what kind of insanity would you call it?—Senile insanity.

Would you be of opinion that Mr. Pagan was insane if there was not and never had been delusion of the intellect?—I certainly think so, after the evidence that I have heard. Disease of the heart produces irritability. If the evidence with regard to the incoherence, violence of temper under the circumstance described, and the attempted suicide be correct, I would say that each of them would be a symptom conclusive of insanity.

Professor Sanders, Edinburgh University, examined by the Dean of Faculty—I have made diseases of the mind matter of special study, and have written upon the subject. I heard of Mr. Pagan's character before 1869. The only thing peculiar previous to that year was the repeated proposals of marriage, in 1867 and 1868. Taken by themselves, these proposals might not indicate much; but, taken with what followed, they indicate the beginning of a change in his mental condition. Such proposals are a very common and marked symptom of the commencement of mental derangement, in old people especially. I have read the evidence given on the previous days, and heard the evidence given to-day, with reference to his condition from April, 1869, down to the time of his death; and I think he was not of sound mind. I think the evidence shows that in the end of April and beginning of May the symptoms of insanity became decisive. There is the change in his character and conduct. He evidently became very irritable, not only to his own family, but to servants, clerks, and others. Then there are the suspicions of a conspiracy, which I would be inclined to call morbid suspicions, the fits of excitement, and the getting into a passion without obvious cause. There is the evidence of the coachman that he was gesticulating and getting quite excited when alone in his own carriage, and when there was no reasonable cause for excitement. There is the swearing, too, which seems to have been a change from his former mode of speech; there is the loud talking and apparent gesticulation also in his own bed-room when alone; and there is the restlessness and sleeplessness at night.

The Lord President—I do not think we heard much of sleeplessness.

Professor Sanders—I do not attach much importance to that; but I attach some importance to the restlessness.

The Lord President—During the day?

Professor Sanders—And at night also. Miss Grace Pagan's evidence bore, if I mistake not, that she heard him wandering about in his own room during the night. Then there is the occasional failure of memory. Sometimes he forgot the names of people and things. Sometimes he forgot also what was his own purpose. We have it in evidence that after going out to make a purchase he had to ask where he was going. During a fit of excitement he made a noise in his carriage, and when the coachman stopped and came round he could not tell him what he wanted. Evidently he had some purpose, which was completely forgotten before he could give it utterance. There is likewise his incoherency. He exhibited symptoms of paralysis of articulation occasionally. A good many witnesses have testified to his thick, inarticulate utterance, and to the fact that sometimes he seemed to be quite unintelligible. Unfixity of purpose, the want of a thorough knowledge of what he was about, appears to me to be shown in regard to the will itself. I have carefully compared the deeds of 1867 and 1869, merely to see how far the changes were con-

sistent with a rational mind and purpose, and with letters he was writing at the same time, and it seems to me that the change in the deed of 1869 exhibits an inconsistency as compared with his own letters and statements. The changes between the wills of 1867 and 1869 struck me very much. In the latter, for example, there is a legacy of 500 guineas to Miss Findlay.

Does the last letter he wrote to that young lady indicate a mind which feels attachment towards her, or is it not rather a sharp communication?

The Solicitor-General—Is that a medical question? (Laughter.)

The Dean of Faculty—Is that what you refer to partly?

Witness—That is partly what I refer to. He speaks of Miss Findlay as the cause of the quarrel in his family; but after attributing to her the blame of the irritation existing amongst his relatives, and dropping the correspondence on that ground, he gives her a short time afterwards a place in his will.

The Solicitor-General—Do you notice that in that letter he sends his unabated love? (Laughter.)

The Dean of Faculty—To the mother. (Laughter.)

The Solicitor-General—No; not as I read it.

Witness—If he sent his love to the daughter, that would be more inconsistent. Why should he send his love to her when they had quarrelled? There is a codicil of 19th July in favour of an aunt, which contains no sum whatever. I should think that an unusual thing in a man of business. It appears to me from the evidence that there can be no doubt there was a progressive failure in his body, and I think in his mind also.

There may be unsoundness of mind or insanity, although there are not always open and continuous manifestation of the symptoms?—Yes.

And the fact that Mr. Pagan should have been able to write letters apparently rational upon various matters of business, and to talk upon road reform and other matters, is not inconsistent with your opinion?—No.

Cross-examined by the Solicitor-General—In saying he was of unsound mind, do you assume he was labouring under delusion of the intellect?—I consider that his notion of a conspiracy was a delusion of the intellect.

Is it necessary, in order to your being of opinion that Mr. Pagan was insane, that he was labouring under delusion of the intellect?—I do not think you will ever have a marked case of insanity without such delusions as delusions of suspicion.

Delusions of the intellect?—Yes.

What was the delusion Mr. Pagan was labouring under?—That his family were plotting against him.

And if that was not an insane delusion, would you say he was sane?—You have the other symptoms indicating that his mind was in a morbid condition.

If the conspiracy was not an insane delusion, is it your opinion that Mr. Pagan was sane?—I should not pronounce him sane, but sanity and insanity pass by degrees into one another. I consider it insanity when you give proof of insanity (laughter). There are plenty of persons insane; but what if you cannot get evidence of their insanity? (laughter).

Would you say Mr. Pagan was insane if the delusion did not exist?—I did not give any very decided opinion. My own impression would be he was not sane.

Would you venture to say, as a medical man, that if the delusion did not exist, he was insane?—I would seek for other symptoms.

The Lord President—Are you prepared to pronounce him insane, taking the case minus the delusion?—I think that the indications of failing memory, and the other indications constitute what, medically, we call insanity; but I do not know if it would be so obvious to others.

The Solicitor-General—Now just answer the question, if you please (laughter).

Witness—It is a difficult question to answer.

The Solicitor-General—That is the reason I put it (laughter).

The Lord President—Taking the case minus the delusion about the conspiracy, are you prepared to pronounce the patient insane?—I am not prepared to pronounce him insane. I thought (Professor Sanders went on to say) the incoherency to which I referred very marked in one or two instances. Failure of memory was also occasionally marked.

Is there any symptom in the case of Mr. Pagan which, taken by itself, would be conclusive of insanity?—I have never in any case pronounced on one symptom where I could get several.

The Lord President—You have said that if you had all the symptoms you have mentioned without the delusion, you would hesitate to pronounce a man sane, but still that you would not undertake to pronounce him insane. I want to know what would, in your opinion, be the condition of that man's mind?—Verging upon insanity.

That is not very distinct. Would you not think his mind was weakened?—I do not think weakness would explain the other symptoms, minus the delusion. There is one of those symptoms—the fits of excitement and the outbursts of temper—I could not explain by mere weakness. I should say that a man with such fits of excitement required to be watched.

Professor Douglas Maclagan, Edinburgh University, examined by the Solicitor-General—I have read the evidence given on previous days in this case, and heard the evidence led to-day.

What, in your opinion, was the condition of Mr Pagan on 16th June, 1869?—He was in bad physical health, labouring under disease of the heart; but I do not think he was diseased in his mind. He was irritable in temper, but his irritation may be accounted for in a way consistent with perfect sanity. His physical ill-health and his ad-

vanced life, to a certain extent, would account for that irritation. People labouring under heart disease very often indicate similar irritability in a marked degree. It is a common thing in medical experience to find that during the last two months of a man's life his temper was very trying to his friends, if his health was bad, as Mr. Pagan's was. It appears to me that there are no symptoms sufficient to suggest senile insanity. Loss of memory is not in any way conclusive of senile insanity. Mr. Pagan would occasionally stop in conversation, but he would soon again take up his discourse at the proper point without prompting, and go on. There was momentary interruption of thought, but he went on immediately afterwards.

And what is your opinion as to that?—I think it was not a defect of memory from the mind having gone, but a temporary disturbance of thought, arising, most likely, from physical causes, probably connected with circulation within the head. We know he had disease of the heart; and circulation is not in a normal condition with heart disease. Incoherence has been spoken of, but incoherence consists in wandering from one subject to another without any proper connection, and I have seen no manifestation of that in this case. There has been evidence, too, in regard to defective articulation; but defective articulation does not indicate insanity. It may be due to partial loss of muscular power in the tongue. Persons with heart disease often pause in conversation, are often afflicted with lassitude and sleeplessness, and have often an anxious look about them.

Cross-examined by the Dean of Faculty—Is talking loudly in a room alone a symptom of insanity?—It is very often present in the insane.

Is anger without a sufficient cause a symptom of insanity?—It occurs in the insane very often too.

Suppose a person not previously given to swearing becoming addicted to it, is that indicative of a change of character which must be attributed to insanity?—A change of character is one of the characteristics of insanity assuredly.

Suppose a man ordering his coachman to bring out the coach, and then saying he had given no such order; suppose a man telling his gardener to lift stones off the grass, and when the man went to do so, asking him what he was doing, would these things not be symptoms of an unsound state of mind?—They show a certain defect in memory most assuredly; but they do not necessarily indicate unsoundness of mind.

Would it not be a symptom of insanity to find a man boxing in his own carriage, and unable to explain, when the coachman went down, what he wanted?—It is very possible he may have been knocking against the carriage to stop the coachman (laughter). It would depend very much upon whether there was a string inside or not.

But suppose the coachman did stop?—There you have again a temporary confusion of thought.

Is such conduct as I have referred to characteristic of heart complaint? (laughter).—It is not essentially a symptom.

Is it not more consistent with insanity?—They are all consistent with insanity.

Is forgetfulness of common things not an indication of insanity?—Like all those other things, it may exist in the insane.

Is a restless and suspicious eye a symptom of insanity?—A well marked suspicious look is very characteristic of insanity.

Do insane people not often get into a state of excitement and anger against those with whom they come most in contact?—Sometimes they do.

Do you consider any importance is due to the proposals of marriage?—No. I do not think that that is an evidence of insanity (laughter).

Does it not occur to you that six proposals made within a short time by a man of Mr. Pagan's age to rather young ladies indicate some mental disease?—It depends upon circumstances. It might possibly be the commencement of mental disease.

Is it not one of the manifestations of mental disease occasionally?

Witness—What? to propose to be married? (laughter). It is not an uncommon thing for a man as old as Mr. Pagan to marry a young wife.

But six proposals?—They merely show that he was set upon it very strongly (laughter).

Is it not an uncommon thing for old men who are getting into a state of senile insanity to make such proposals?—Seldom to make proper proposals of marriage so much as to make improper proposals.

Then you think that the proposals here are entitled to no consideration?—I do not say that exactly.

What weight do you attach to them?—I do not attach weight to them as indicating that the man was insane.

Or that there was a commencement of insanity?—I do not think they entitle me to say that.

What are the symptoms of senile insanity?—Chiefly loss of memory, incoherence, difficulty in keeping up a sustained conversation, and delusions of the intellect.

And irritability?—Often enough.

Looking to all the symptoms which have been mentioned, do you still say that you consider Mr. Pagan sane?—I do. I notice that the proposals which have been referred to were all made before he had the fit in September, 1868; and it strikes me as a remarkable circumstance that no proposal of marriage was renewed after that—after his health got worse. If the proposals had been premonitory of insanity I should certainly have expected them to be renewed.

Dr. W. H. Lowe, medical officer of the Saughton Hall Asylum, examined by the Solicitor-General, deposed—I have carefully looked at the evidence, and I consider that Mr. Pagan was sane. I do not

see anything to lead to the conclusion that there was senile insanity. Such pauses in his speech and resumption of his discourse as Mr. Pagan showed, are often manifested by persons who have heart disease.

In cross-examination of Dr. Lowe, by the Dean of Faculty, substantially the same answers were elicited as in the cross-examination of Professor MacLagan.

This concluded the evidence.

The Dean of Faculty, in addressing the jury for the pursuer, reviewed the whole evidence, and maintained that Mr. Pagan, at the time of making his last settlement, was of unsound mind, in evidence of which there existed the change in Mr. Pagan's character and conduct, his numerous offers of marriage to ladies for whom he appeared to have no special affection; he was suspicious and irritable, and laboured under a delusion. The learned counsel also remarked that it would not do to take these symptoms separately, and say, "That, for example, is not necessarily consistent with insanity."

The Solicitor-General addressed the jury for the defenders. He appealed strongly to the feelings of the jury by dwelling upon the undesirableness of such cases as the present becoming the subject of public investigation and gossip. He attributed all the peculiarities and irritability of Mr. Pagan's conduct to failing physical health. He, however, founded his case on the fact that he considered that it had been established that there could be no insanity without the existence of delusion. Concerning the supposed delusion of a conspiracy, the counsel said that an insane delusion did not mean a mistake, however gross; or a misconception, however great. It meant the product of a man's diseased imagination; it meant that he conjured up fancies, and acted upon them as if they were realities. It was utterly impossible to say that Mr. Pagan had not reasonable grounds for the belief he expressed. It was said on the other side that what he believed was untrue, but many people believed things which were not true, and such persons were not subject to delusions of the intellect. The question was whether there was reasonable ground for the belief, however mistaken the belief might be.

The Lord President reviewed the evidence at great length, to the effect that Mr. Pagan was not insane at the date of making his last will. He dwelt on the fact that Mr. Pagan had capacity enough to draw out his own will, and transact other matters quite correctly. The following are a few of the remarks his Lordship made:—

When it was alleged that a deed was not the deed of the man who signed it, a number of things might be meant. It might be meant that the man had not mind enough to know what he was doing—that he had not mind enough either to conceive or to execute a settlement of his affairs, the natural result of which would be, that the deed must be the doing of somebody else, and not of the testator. Again, a man might be acting under the influence of such an insane delusion

as to drive him to the execution of a deed which he would not otherwise have executed. In such a case the deed would not be his, because it would not be the intelligent expression of his will and purpose. But what was the condition of Mr. Pagan's mind on the 16th June, 1869? He certainly was quite able to understand the deed, for he drew it up himself. There was evidence, beside the circumstances attending the execution of the deed, to throw some light upon the condition of the testator's mind on that day. There was a letter to the Rev. Mr. McFarlane, and another to a tenant: three letters, treating of entirely different subjects, contained nothing amiss. It was certainly quite possible that a man might not, at the time of executing a deed, exhibit what one would call unmistakable symptoms of unsoundness of mind, and yet be, after all, in a state of insanity, in this sense, that there were insane delusions affecting his intellect. Referring to the numerous proposals of marriage, his lordship remarked that these formed a curious feature in the case; and he added that it was rather strange that if the proposals made were preliminary and premonitory symptoms of insanity, those proposals should disappear entirely when insanity came. The symptoms which preceded insanity, and indicated its approach, in an ordinary case, went on increasing as the disease advanced. But in this case, all thought of marriage, and all sensual ideas connected with such a subject, as far as could be seen, were entirely absent from the mind of Mr. Pagan during the whole of the year 1869. The judge then referred to the evidence bearing upon the allegation of senile insanity; concerning the entire perversion of Mr. Pagan's propensities, and the existence of delusion, the latter he considered the most important point for consideration: three of the medical witnesses made it the turning point of their evidence. His lordship considered Mr. Pagan justified in believing that a conspiracy, a common desire or purpose, existed to prevent Miss Findlay visiting Clayton; he laboured under no delusion.

The jury gave a verdict for the pursuer by a majority of seven to five.

This verdict was subsequently set aside by the Court as being contrary to evidence, and a new trial was granted.

At a meeting of the Court, in July, it was stated that the pursuer intended to proceed no further in the matter; he had cleared himself of a slur on his professional capacity, and would now carry out his father's intentions as contained in the disputed settlement, although he believed that such were not his father's intentions so long as he enjoyed mental health.

On a subsequent occasion, the consideration of costs, the Court expressed the opinion that there was no ground whatever for alleging the insanity of the testator, and that the action ought not to have been brought.

Probably no one who has taken the trouble to study the preceding case will deny that it presents many points of interest for those en-

gaged in the treatment of mental diseases. It affords a capital instance of the glorious uncertainty of law and medicine in such cases, and raises the important question whether judges and juries are the best qualified parties to decide the fact as to a man's sanity or insanity. As is well known, it is maintained by many, learned in their own conceit, that to settle the question as to a man's sanity is simply an affair of a little common sense, requiring no special knowledge. But to such, it may be answered that they talk in ignorance, and are therefore confident. Mr. Erichsen has justly remarked concerning the difficulties attending the ligature of arteries, and his remarks may be applied with equal propriety to the diagnosis of mental diseases, that those of the largest experience are best able to judge of the difficulties, and to view mercifully the mistakes of others. It cannot be denied that medical witnesses have too often brought disgrace on themselves and the profession through their ignorance and vanity; but it cannot be said that on them alone rest the responsibility and obloquy that, at present, the utmost confusion and uncertainty exist as to the legal position of those mentally affected. When, as in the present case, a judge, without chance of contradiction, says that the symptoms which precede insanity and indicate its approach, in an ordinary case, go on increasing as the disease advances, it becomes really necessary that some arrangement should exist to neutralise the effect of such statements upon the mind of the jury. It is a fact with which all "asylum men" are quite familiar, that symptoms of insanity do not, as a rule, increase in intensity, without other features appearing, by which the original condition of the patient becomes much modified, often entirely changed. This subject is discussed by Dr. Batty Tuke, in his paper on "A Pathological Classification of Mental Disease." He objects to the ordinarily received classifications, because within a very short space of time, an individual may exhibit the symptoms of several of the forms of mental disease as enumerated in text-books. Dr. Tuke traces the course of a case of General Paresis, and continues—"Thus, in one single case, not by any means a hypothetical one, but one of every day occurrence, we have every so-called form of insanity."

As is usually the case, it is much easier to indicate an abuse than to suggest a remedy. But it is, perhaps, worthy of consideration whether disputed cases of mental derangement should not be submitted to the decision of a jury composed of experts. Let it be granted that they have but an average allowance of common sense, and are no better able than an ordinary jury to consider a question of evidence or of a purely legal character, they would yet be able to bring special knowledge to bear upon the case under trial, and give proper weight to the opinions of the medical witnesses. It appears to be too often forgotten that the value of a medical witness is modified by many circumstances, *e.g.*, his opportunities for acquiring special knowledge; the character of his evidence in previous cases; the position of his authorities. It must not be forgotten that in disputed cases of insanity, as in disputed dogmas in

religion, authorities can be brought forward to support any opinion, and the real difficulty is to decide which is correct. The truth lies somewhere, but its discovery is not facilitated by submitting conflicting opinions to those who have no special knowledge of the matter. Had the preceding case been submitted to the decision of a jury of experts, the cause of justice could not have suffered thereby, but would probably have prospered by a decided opinion being expressed that Mr. Pagan was insane when he made his last will.

To discuss fully the individual points of interest in the evidence in this case would be to discuss the whole subject of the diagnosis of insanity, a task impossible at the present time; but a few remarks may be permitted concerning the probabilities of Mr. Pagan having been an epileptic. During his illness, Mr. Pagan was thought to give evidence of some of the characteristics of general paralysis; but it does not appear to have struck his medical attendant or any of the medical witnesses, that the patient suffered from "*le petit mal*." Yet there appears abundant evidence to prove that he laboured under this disease. Numerous witnesses observed that Mr. Pagan sometimes stopped suddenly in the middle of his sentences, appeared to become unconscious, and in a few seconds resumed his conversation exactly at the word where he had paused. This is, as is well known, one of the most striking and characteristic symptoms of "*le petit mal*," and its presence, in the case under consideration, should have suggested the propriety of further research into the condition of the patient. Let us contrast the condition, bodily and mental, of the late Mr. Pagan, with the following sketch of "*le petit mal*," as given by Dr. Russell Reynolds, in his "*System of Medicine*." He says—"All that occurs, and can be positively attested in cases of this description, is a sudden, temporary, but absolute arrest of both perception and volition. The individual so attacked loses consciousness for two, three, or more seconds, and may after that or a longer period resume his sentence or employment, perfectly unaware that anything abnormal has happened.

"Sometimes there is slight loss of balance; the patient, if standing or walking, leans to one side, or staggers, but does not fall; sometimes there is a pallor of the countenance, followed by slight flushing; sometimes the latter without the former; sometimes there is slight dilatation of the pupil, and an absence of the expression of 'looking at anything;' sometimes an irregularity and faltering of the pulse; but often, as I can testify from repeated observation, there is not any one of the physical changes I have mentioned; the patient's mind becomes a blank for a few seconds, and that is all that can be observed.

"These seizures are often regarded as 'faintings,' and are described by patients under various terms, such as 'blanks,' 'forgets,' 'faints,' 'sensations,' 'absences,' 'darknesses,' &c., &c.

"Occasionally these slight attacks are preceded by vertigo; the patient thinks that he shall fall, and so lies down to avoid doing so;

sometimes he staggers and grasps an object for support; but much more commonly he simply ceases to perform any act requiring volition—he stops speaking or writing; but the automatic movements of standing, walking, or holding an object, are maintained.

“ Sometimes the attack is followed, for a few seconds or for a longer period, by an obscured state of intelligence; the patient speaks in reply to what is asked of him, but in half an hour afterwards is found to have entirely forgotten what was said to him or by him. In more rare cases the mind is dull, or altered from its habitual condition for a period of some hours, the patient being low-spirited, or suspicious, and apparently labouring under some delusion which he afterwards forgets. In this condition he may be listless, or he may do some odd things which he cannot afterwards account for, or even recollect.” (*Reynold’s System of Medicine*,” vol. ii, p. 260-1.)

If it be granted that Mr. Pagan was an epileptic, many of the difficulties connected with the case are at once removed, and the contradictory nature of the evidence explained. But epileptics are not the only class of lunatics in whom the mental condition varies much within short periods; and in connection with this subject it may not be out of place to make a few remarks on the value of negative evidence in cases of disputed sanity. When a witness states that at a certain time he saw and conversed with the person whose mental state is the subject of enquiry, and that he saw no symptoms of insanity, the answer is ready that, perhaps the witness was not shrewd enough to observe the real condition of the patient, or that, at that special time, the patient was not excited, and did not manifest his true condition. Very few patients indeed exhibit at all times and on all occasions their mental disease, and it is this circumstance which misleads many who visit lunatics in asylums or in their own homes. Every medical officer of an asylum must recollect instances in which relatives have insisted on removing a patient, believing him quite well, because they had been unable to discover his true state. Whatever may be said to the contrary by some, it is not always an easy matter to discover the true state of a man’s mind; sometimes it is extremely difficult. In support of the truth of this statement numerous illustrations might be quoted, but this is unnecessary, as this subject has been treated at length in text books and elsewhere. To my mind negative evidence is absolutely worthless in cases of insanity. It reminds me of the story of a criminal (of course said to be an Irishman) who declared that it was hard and unreasonable to convict him of an offence on the testimony of two or three eye-witnesses, when he could get all the world besides to swear that they did not see him commit the act.

It is impossible, on the present occasion, to discuss at full length the diagnosis of senile dementia, but I may briefly refer to an excellent example of the disease which I had at one time under observation. The patient was in practice as a general practitioner when I saw him, yet so demented that he occasionally forgot his own name. At one

time he had been a strong, active man, of a mild disposition and even temper; but gradually he became irritable, swore abominably, and caused great uneasiness to his relatives by his conduct. The feature in his case to which I wish to direct attention is the variations in his condition. I have heard him reading the papers to his family, making remarks on the debates in parliament, and so forth, but on having some difficulty in folding the newspaper, he would tear it in pieces, swear, weep with rage, and then in a few minutes settle down and finish what he had been reading. I have often accompanied him in his professional visits; in one house he would be very pleasant, chat with the patient, tell a story to amuse the children, and conduct himself as he had done before his illness; in the next he would outrage all professional and social propriety. One evening he was in a very pleasant humour, and was entertaining me with many amusing stories about his professional experience, when a fly lighted on his nose; in an instant he became excited, swore, rushed to the stable, and insisted on making a journey to a neighbouring hamlet, where, however, he had not a single patient at that time.

With Dr. Browne's evidence I am sure the majority of asylum physicians will heartily agree, as being but the expression of their own experience. We must, therefore, sympathise with the pursuer in the preceding case in his crowd of calamities; he has lost his property; a verdict in his favour has been set aside by the Court, as contrary to evidence; he has been refused the usual expenses on the ground that, in the opinion of the judges, the action should never have been brought, because there was no ground for alleging the insanity of the testator; and, lastly, he has excited the indignation of many individuals who have expressed their wrath in a very marked, but exceedingly disagreeable manner. But they forget that the pursuer only attempted to protect his own interests by the only method within his power.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

A Quarterly Meeting of the Medico-Psychological Association was held in the Library of the Royal College of Physicians, Edinburgh, on Thursday, the 30th November. Present:—Drs. J. Smith, Skae, Howden, F. W. A. Skae, Ireland, Christie, Rorie, Lowe, Campbell, Sanderson, Grierson, J. Batty Tuke, and Eastwood.

Dr. SKAE (Morningside Asylum), on taking the chair, said—Gentlemen, I am very happy to see so many of you assembled here, and I sincerely trust that this meeting may prove a very instructive and interesting one to us all, as I am confident it cannot fail to be a very pleasant one.

I beg to thank you for the honour you have done me in placing me in the chair. I hope I will not disappoint you when I say that I have no formal address prepared for you. Indeed, since your last meeting, I suffered so much from illness, and was so long absent in the pursuit of health, that since my recovery and my return to my duties I have not had the time to work out anything in our special department worthy of your notice. I do not regret this, as I am sure the contributions we are to have from the members of the Association will be far more interesting than any formal address from me. I have tried to think what I ought to say to you on this occasion, and the first thing that occurred to me was to congratulate you on the progress of psychological science. When I look at the valuable works which have been published within the last year, the very valuable papers on insanity which have appeared in our Journals, the highly important experiments which have been made in *Scotland*, on the treatment and management of the insane in cottages, a subject of vast interest in a humane as well as in an economic point of view; the ventilation of the subject of the treatment of inebriates or insane drunkards; the careful study of the *medical* heat of insanity; when we reflect, lastly, on the progress of our physiological and pathological inquiries in regard to insanity—not very brilliant, but very promising—I say, when we reflect on all these topics, I think we may well congratulate each other on the fact that we are not *standing still*, but making a steady onward progress in the search after truth, and in the discharge of the onerous duties devolved upon us. These results, I think, we have, in a very great measure, to ascribe to the institution of the *Psychological Association*, to its *Journal*, and lastly, in some degree, to our quarterly or local meetings, such as this. I trust that on this occasion your contributions may give, as formerly, an onward impulse to our movements. Among other thoughts which occurred to me in reference to this address, was the propriety of my getting on the back of my latest hobby, "*The Classification of Insanity*," and giving it an airing for your benefit!! I forbear, however, although I must give you a few thoughts on the subject—perhaps of a somewhat rambling nature, but very short. In the first place, I congratulate myself on the general favour with which this mode of classification has been accepted by some of the best writers on insanity, by my distinguished friends Dr. Maudsley and Dr. Arthur Mitchell, by Dr. Blanford, and others. I ought to add the names of my old medical assistants, Dr. Yellowlees, Dr. Clouston, Dr. J. B. Tuke, and others, who have either used it or written about it. To all of them I would offer the same petition, viz., that they would work it fairly out, and they will find, as I and others have done, that it is the only practical and available nosology of any value in the present state of our psychology. I take this opportunity of thanking the gentlemen whose names I have mentioned for the very laudatory terms in which they have mentioned my name in connection with my views. I shall conclude with

one or two strictures on the criticisms made on my classification. Dr. Blandford seems to think that my classification is based on an etiological basis entirely. This is far from being the case; it is based, as fairly shown by Dr. Maudsley, upon an attempt to group the various forms of insanity into "*natural families*," as we describe scarlatina, typhus or typhoid fever, measles or cholera, the natural history of all which we know—their early symptoms, the course and termination of them, and it may be, but that is immaterial to their nosology, their supposed cause. So, in my classification, the name may suggest that the form is designated from its *cause* alone, but it is not so; the cause may be made use of as a convenient means of designation, but no more. Many of the forms of insanity, such as general paralysis, &c., have many assigned causes. If a physical or pathological cause can be found, of course I prefer it as a name for the form of the insanity, just as I would designate the disease causing cough, rusty sputa, and dulness of percussion, "*inflammation of the lungs*," or "*pneumonia*." Dr. Blandford thinks I do not sufficiently recognise hereditary predisposition as a cause. Now, the fact is, that on the contrary, I think there is a predisposition to insanity in every case of insanity that occurs. This predisposition may not be always hereditary, but I have not the least doubt that in most cases it is. The scope of my paper on classification does not include as necessary adjuncts either the predisposition or the exciting causes as its essential elements. Exception has been taken to my *Idiopathic Insanity*, as being a sort of tomb to which we may consign every form of insanity that we cannot otherwise dispose of. It is so, and it is the same in regard to the nosology of other disease. You have idiopathic epilepsy and symptomatic epilepsy arising from a variety of causes; constitutional, congenital, accidental, and the results of poison, injury, &c. Why should we not, on recognised principles of nosology, have our idiopathic insanity, sthenic and asthenic? Moreover, I think it right to add that the cases of insanity referred to this form, will be found otherwise sufficiently characteristic in their origin and history to deserve a special place. They are—whether acute or chronic, whether sthenic or asthenic, and whether the symptoms are those of excitement or depression—all referable to *moral causes*, such as sudden shock, loss of fortune, &c.; and are all preceded by the same uniform *proximate cause*, the *want of sleep*. Dr. Brigham, of New York, ascribed all cases of insanity to *want of sleep*. Dr. Bucknill ascribed all cases of insanity arising from moral causes to want of sleep, and although not going the whole length with Dr. Brigham, I have held the same opinion as Dr. Bucknill during all my professional life. Idiopathic insanity is in my opinion sthenic or asthenic, according to accidental circumstances in regard to the bodily health of the person affected; but the name should be reserved for all cases which can be referred to *moral causes* only, and in all these cases, as I have already said, the immediate or proximate cause is the *want of*

sleep. With these somewhat rambling, but I trust suggestive, remarks, I beg you will proceed to business, and that our secretary will, in the first place, read the minutes of our last meeting.

The SECRETARY having read the minutes of last meeting, which were approved,

The PRESIDENT said the next business was to settle on the next place of meeting.

Dr. HOWDEN suggested Glasgow, and recommended that it should take place either earlier or later than the time at which they, at their last meeting in Glasgow, met, in order to give an opportunity to certain of the professors of the University to be present. Several were interested in the subject of psychiatric medicine, and would undoubtedly avail themselves of the opportunity. If the meeting could fix a date prior to the close of the winter, or after the opening of the summer session, a good attendance would be ensured.

It was proposed and agreed, in accordance with this suggestion, that the meeting in Glasgow should be held on the second or third Thursday of May, 1872, the definite arrangements being left to Dr. J. Batty Tuke to carry out.

Pathological Specimens.

Dr. J. BATTY TUKE exhibited two skulls, both of which presented the marked abnormality of absence of the sagittal and coronal sutures. The first he had accidentally picked up in the village of Leuchars, in Fifeshire, in the carefully conserved old shop of a deceased "Gideon Gray," whose son presented it to him. It was evident that this was not the skull of an aged person, as the occipito-sphenoid synchondrosis was not ossified, and as the wisdom teeth had not been fully developed. There was no reason to suppose that the centres of ossification had been abnormal, but that the sutures had been ossified in utero, as the parietal bones had been developed laterally, deforming the squamous suture. The lambdoidal suture was normal in every respect. There was no history of this skull; it had been suggested to him that it might have been picked up on Tent's Muir, where wrecks frequently had occurred, and that it had, from its configuration, belonged to a Coolie. This was, however, doubtful, as the ossified sutures would account for any abnormality in its shape. The second skull had been kindly lent by Professor Turner; it presented the same abnormality, but was a much inferior specimen, as the facial bones were absent. He promised a more detailed account.

The PRESIDENT said his opinion was—first, that they were both skulls of women; second, that they had not belonged to idiots; and, third, that they were foreign. He had a Parsee skull which was like one of them.

Dr. HOWDEN (Haddington) sent a specimen from the vertex of the skull of a patient who had been in the habit of throwing summersaults on to the floor. She had frequently bruised and injured the top of

the head. After death, which had not resulted from this practice, a small abscess was found between the dura mater and the skull, which had destroyed the inner table.

Communications.

Dr. J. BATTY TUKE read a paper (written in conjunction with Dr. John Fraser, Assistant-Physician of the Fife and Kinross Asylum), on "A Case of Ataxic Aphasia and Agraphia, with Locomotor Ataxia." —(*See Part I., Original Articles.*)

The CHAIRMAN said he was sure they were all very much indebted to Dr. Tuke for the very interesting and valuable paper he had just read. He would be glad to hear any remarks upon it. He had a very interesting case of aphasia under his care. It was a periodic case—the only one he had ever heard of.

Dr. TUKE said that periodic cases were not uncommon.

The CHAIRMAN said the patient took ill once in six weeks or two months. She got negligent of her person, her hair was dishevelled, and when she tried to speak she could not do so. She could write one or two words. If she was asked what she would like she would probably write the word "orange;" then another word, and then nothing at all. The disease would then leave her in the course of two or three days.

Dr. CAMPBELL then read a paper, "On the Relative Value of Single Doses of Tincture of Hyoscyamus, Bromide of Potassium, and Chloral." —(*See Part I. Original Articles.*)

The CHAIRMAN said that this was one of those interesting practical papers which were exceedingly valuable. Many medicines which were used for centuries had now been given up entirely, and many others were just becoming known.

Dr. TUKE said it was difficult to make any remarks on the paper, except on the general question. He thought it would be a good plan to defer the consideration of papers till the meeting after the one at which they were read. In his own paper he knew that there were many weak points—(a laugh)—but it was impossible for a person to follow out the details at once. There were few who could grasp a subject so as to discuss it thoroughly on once hearing it; and in regard to the paper now read it was impossible to carry the figures in one's mind.

The CHAIRMAN said that he agreed very much with what Dr. Tuke had said, but he did not know that it was really necessary to study the papers before discussing them; as it was more with the view of comparing notes that the papers were read. He had no doubt that the gentlemen present had had their own experience as to the effects of chloral and bromide of potassium. Of course it could not be expected that they could go into an analysis of the paper unless they had an opportunity of seeing it beforehand.

Dr. HOWDEN said there was one point as to the use of narcotics that was not kept in view, and that was, that by producing sleep they did not necessarily do the patient good. His own experience of chloral was not favourable as far as curing the patient went. It produced sleep in a remarkable degree.

The CHAIRMAN said his experience coincided with that of Dr. Howden; and he thought that many of those narcotics prolonged disease. He knew two ladies who were subject to periodical attacks of insanity occurring at long intervals. Each of them recovered after about six weeks' illness. During one of the last attacks they had some years ago, they were treated with Indian hemp by Dr. Yellowlees. He gave them large doses of that, which had the effect of producing sleep and preventing them tearing their clothes; but with this result, that the one lady did recover in ten months, and the other lady did not recover at all. That had shaken his faith in the curative power of these narcotics. He thought they were resorted to more for the sake of peace and quietness than for their curative qualities.

Dr. CHRISTIE said he thought that there were certainly cases where, if they saw a patient sinking it might be well to give him chloral to pull him up for the time, but he was of opinion that chloral was not a curative agent. It produced sleep, but not a cure.

Dr. CAMPBELL said that his paper dealt with the relative action and value as a soporific of the three drugs, and that it had little to do with the curative process.

Dr. HOWDEN said that the two questions were so closely allied that they could not separate them. He did not give the patients narcotics, but he fed them well.

Dr. TUKE said he had two cases shortly after chloral came out of acute alcoholic insanity. One of the cases had run three weeks and there was no improvement. The patient got several doses, and recovered after a week, perfectly for the time. In another case—a recent one—the patient was cured in a month by the use of chloral. In some cases he believed it retarded the cure for many months, and, like Dr. Howden, he had given up the use of chloral. He believed that acute cases would get on better the less they were touched.

The CHAIRMAN said he would like to know the opinion entertained in regard to the use of the warm bath in acute cases.

Dr. CHRISTIE said he had found it very useful.

The CHAIRMAN said he had used it until he was obliged to give it up, as some of the patients died suddenly.

Dr. HOWDEN said he had to stop the use of warm baths for the same reason, as he had lost a patient.

Dr. EASTWOOD said he agreed with Dr. Campbell as to the relative value of the three medicines. He was of the same opinion as to chloral that he expressed, but he was not favourably impressed with it as a curative agent. In an acute case he had never seen so much good done as in keeping the bowels open, the use of the bath, and of

opium. He had never found anything of so much value, and he did not think anything could be so satisfactory in acute mania.

Dr. F. SKAE said he would like to ask Dr. Campbell, or any one else, if they had tried chloral in the treatment of hallucinations? He mentioned the case of a woman under his care who had hallucinations of taste and hearing. She thought the coffee and porridge were poisoned, and she could not sleep at night because she heard the voice of her child crying that he was being murdered. After the chloral was given the delusions went away.

Dr. CAMPBELL said he thought one would need to treat the same case several times before arriving at a decided conclusion.

Dr. IRELAND read a paper "On the Best Methods of Teaching Idiots to Speak."

In the course of the discussion which followed Dr. IRELAND expressed his opinion that it was quite possible to so far educate many idiots as to enable them either to make their own living or to assist in so doing, but always under supervision. He further explained his views as to the pathology of idiocy, remarking that he did not consider that its pathological aspects had been sufficiently regarded. The term idiocy should be used as a pathological generalization, embracing at least ten pathological divisions, such as Eclampsic Idiocy, Epileptic Idiocy, Microcephalic Idiocy (a comparatively rare form), Congenital Idiocy, Hydrocephalic Idiocy, Paralytic Idiocy, Inflammatory Idiocy, Cretinism and Idiocy from compression; he had little doubt but that research would soon add more to this list.

The SECRETARY read a paper by Dr. Wood, of Dunston Lodge, "On Seclusion."

In the course of the somewhat desultory discussion which ensued opinions were expressed that the system of airing courts advocated by Dr. Wood was only seclusion in another form; that the term seclusion was ill-defined, and that it was frequently necessary to report as in seclusion patients who either voluntarily or from sickness were confined to their rooms with the door locked.

Dr. IRELAND said a dose of laudanum caused seclusion practically as much as confinement in a single room; he believed that in certain cases moderate seclusion was beneficial.

The habitual employment of seclusion was generally deprecated.

A vote of thanks was accorded to the President and Fellows of the Royal College of Physicians for their kindness in placing their Hall at the disposal of the Association.

In the evening the Members dined at the Café Royal.

A quarterly meeting of the Medico-Psychological Association was held at the rooms of the Medical Society of London, on Wednesday, December 6th, 1871; Henry Maudsley, M.D., F.R.C.P., President, in the chair.

Members present—Dr. Maudsley, Dr. Sheppard, Dr. Brushfield, Dr. Bodington, Dr. Warwick, Dr. Sabben, Dr. Nicholson, Dr. Boyd, Dr. Tuke. Visitors—Dr. Webster, Dr. Tatham, Mr. Wolten, J.P., Somersetshire.

After the reading of the minutes,

Dr. TUKE remarked, in reference to a case of general paralysis he brought before the Association at the last meeting, where the patient had been treated by calomel baths, that he was glad to be able to report that the patient had not relapsed, and had since inherited a considerable property.

Dr. MAUDSLEY said that as some remarks which he had made on a former occasion in regard to the use of sedatives in the treatment of insanity had not been rightly understood in some quarters, he wished it to be distinctly understood that what he questioned was the frequent and large use of chloral to quell excitement. The question was, whether chloral given several times a day was beneficial, and did not increase the tendency to dementia. Or, in other words, Is the habit of administering 30 or 40 grains of chloral three times a day, as is sometimes done, in order to allay excitement and keep the patient quiet, a good one? The question included the habitual use of all other sedatives; it was not the question of the occasional use of a drug as a hypnotic.

Dr. SHEPPARD considered that the continued use of chloral was not desirable, as it certainly produced dementia; still its occasional use was necessary. Opium, in his experience, was valueless beside chloral; he used to give it in the larger doses, but had discontinued to do so; he now only gave it at night time; he preferred the use of digitalis under great excitement. Dr. Sheppard then referred to a curious case of accumulated rubbish in the stomach of a patient, who had been under his care. His appearance presented general emaciation, and he noticed a great enlargement of the abdomen; the bowels were acted on daily, but vomiting likewise occurred every day. The patient died, and at the *post mortem* Dr. Sheppard found in the stomach 8lbs. of rubbish, the handle of a knife, rags, old pieces of teacup, &c.; he really died of emaciation caused by the absorption of the gastric juices.

Dr. SABBen said chloral, like all new drugs, has certainly received its share of attention; he had used it both in large and small doses, and had come to the conclusion that when given in small doses two or three times a day for any lengthened period, it lowered the vital power and caused considerable prostration. He had recently seen in consultation a young lady who was suffering from hysterical mania, in an extremely debilitated condition; her medical attendant stated that he had been giving her from 10 to 15 grains of chloral two or three times a

day for severe neuralgia, to which she had been a martyr for nearly six months; he advised the chloral to be discontinued, and the lady recovered in the course of a few days. He was of opinion that chloral should be used in doses of not less than from 20 to 30 grains, and that the interval of administration should be at least 24 hours. Dr. Shepard's remarks upon patients swallowing foreign bodies, reminded him of the case of an idiot in an asylum in the neighbourhood of Edinburgh, who, on two different occasions, swallowed a table-spoon; the first time it remained in the stomach several weeks, eventually perforating the walls of the abdomen; the handle appearing, the patient pulled the spoon through the opening and swallowed it again immediately, when the same course of riddance was pursued. Six months since a gentleman under his care swallowed the greater portion of half a blanket, having first torn it into strips; though the stomach was very much distended, he did not appear to suffer much inconvenience, and, strange to say, his recovery commenced from that time.

The PRESIDENT said that, although not a business of the evening, he might mention to the members that there was a project of forming a psychological section at the next meeting of the British Medical Association, at Birmingham, and Dr. Bodington, who was present from Birmingham, would like to ascertain the feelings of the members on the subject.

Dr. BODINGTON was deputed by Mr. BARTLETT to ask the question, and, if agreed to, the section would be formed.

It being the general opinion that the matter should be referred to the Council, it was determined that course should be taken.

Dr. MAUDSLEY then read the paper of the evening. *Subject:—"Is insanity on the increase?"—(From want of space, the paper cannot appear in this Journal, but it, or an abstract from it, will be published in the next number.)*

Dr. TUKE—It is impossible to over estimate the importance of the question brought before us this evening in the able paper of our President. To the political economist and to the philanthropist, the alleged fact of the increase of insanity, concurrently with our advanced civilization, must be a matter of grave solicitude and regret; to ourselves, as specialists, it would indicate that we are expending our energies in vain, and are utterly failing in our endeavour to arrest the onward march of mental disorders. I am happy to be able to concur with Dr. Maudsley, and with Dr. Lockhart Robertson, to whose carefully written papers on the subject we are so much indebted, that the idea of the relative increase of insanity is an entirely mistaken one; I would go still further, and believe that it will be found correct to say that the modern treatment of the insane, more humane and more skilful, has diminished the relative number of cases of insanity, although the absolute number has increased. The very important tables given in the last report of the Commissioners in Lunacy, amongst other information, state the fact that ten years ago, the proportion of the insane to the sane was 1·86

per 1,000, and that this proportion at the last return had risen to 2.49; in other words, there were during the last year, nearly 20,000 more under treatment as lunatics than there were in the year 1859—there being now 56,755 individuals returned as insane in a population of nearly 23,000,000. I think the question as to whether the increased wealth and advancing intelligence of the country has anything to do with the increase of the insane is disposed of by the statistics given by the Commissioners; they tell us that the ratio of the disease in the higher ranks has *not* increased, although, as we all know, the last ten years must have added largely to our monied class. This question, however, demands separate consideration, and I would simply now examine the question as to the general increase of the insane. I quite agree with our President, that the increased longevity of the insane, and the fuller registration of their numbers, which the organization of the Lunacy Boards has accomplished, account in a great degree for their certainly greater number. I should, however, be inclined to doubt whether, during the last ten years, this would have so much weight as it would have if a date, twenty or thirty years earlier, were to be compared with the present year. I would supplement the reasons already indicated by two more valid considerations—first, the increased amount of emigration, which has taken away in large numbers the finest frames and largest brains of our working population; second, and this seems to me of the gravest importance, the error that has been committed in estimating the increase of the insane by comparing them with the number of the population; if the population increased always equally as regards men, women, and children, the conclusion arrived at would be correct, but it is not so. The fact is, that the population in a country like ours increases not in equal ratio; up to a certain point the increase is always in the adults. Thus, at the last census, the people whose age was between 20 and 40, increased 60 per cent. upon the census of 1851; of ages between 40 and 60, the increase was 55 per cent.; while of those under 20, the increase was only 37 per cent. Now, I need hardly remind you that insanity is essentially a disease of middle and later life; hence, then, the comparison between the number of the insane and the population without reference to the ages of the population, involves different factors, and leads to an apparent relative increase of lunacy, while the increase is simply depending on the *increased number of persons living whose age renders them susceptible of such a malady*; and, statistically speaking, the chances of an individual becoming insane are really, at this date, lessened; and if there be a greater absolute number of the insane, there is at the same time a greater number of adult males and females, therefore relatively, the number of the insane has diminished. I propose at an early period to bring before you the tables on which my remarks are based; the figures I have given, as far as they go, are accurate, and I confess that I am glad to be able to congratulate this Society that the work of such men as

Esquirol, Pinel, Conolly, Tuke, Bucknill, Robertson, and a host of others, the exertion of the Lunacy Commissioners, the national philanthropy that has expended such large sums upon the helpless lunatic, and our own arduous labours as specialists, have *not* been wasted, and we may be assured that as much has been done, so more will still be done, not only to ameliorate, but to cure the most terrible malady that afflicts mankind.

Dr. WEBSTER fully agreed with Dr. Maudsley in all he said. Formerly it was the custom in Scotland for clergymen and other charitably disposed people to receive pauper idiots and imbeciles about their places, and let them stay there. No register was kept of these people; no one knew anything about them. When the county asylums were built they were sent there by their different parishes, and of course swelled the number of lunatics said to be existing. Doubtless, too, the care that was taken of them in the asylums greatly prolonged their lives.

Dr. WARWICK said the question was, Has the present state of civilization increased the number of insane people? At any rate the *cure* of insanity has not increased. He had, some years ago, investigated the statistics of St. Luke's and of Bethlehem, and had found that the percentage of recoveries was now distinctly less than in the olden times. A proportion of the alleged increase of insanity might be due to the smaller percentage of recoveries. Whatever other advantages it has had, the humanity of the present system has not increased the cures.

Dr. TUKE could not agree with the last speaker; the cures were greater by far during the last ten years than ever they were before, as he would undertake to prove.

Dr. SHEPPARD regretted that the lateness of the hour left him little more to do than thank Dr. Maudsley for the excellent paper he had read, although there were some points on which he did not agree with him, and which he would take an opportunity to mention at a future time. He thought that the tone of the times, the high pressure state of society, had much to do in causing an increase in the statistics of insanity.

Dr. NICHOLSON agreed with Dr. Sheppard. The more acute cases of insanity were doubtless due to the go-a-headism of the times. He thought that there was an increase in the number of cases of chronic insanity.

Dr. MAUDSLEY replied briefly, and the meeting adjourned.

UNLOCKED DOORS.

Dr. Batty Tuke makes the following remarks in the last report of the Fife and Kinross Asylum:—

“ Finding that the open door system worked so well in the new buildings, I was led to extend it gradually to the main Asylum. First of all, the doors between the various wards and corridors were left unlocked, and, subsequently on the male side, the outer doors have stood open. I have had no reason to regret this step, on the contrary, I believe that it has conduced materially towards the welfare of my patients; only one escape has occurred in consequence in four months, and that one of no moment. My conviction is that the locked door and grating key induce a desire to abscond from the very irritation caused by their constant obtrusion on the sight and hearing. For many years I as an asylum physician have applied a key to every door I had to open; it has ever and always grated on my ear—how much more must it have grated on the ears of those confined through its influence. Few, whether sane or insane, can overcome the loss of personal liberty; but when it is restricted from necessary causes the subject of detention benefits from the absence of mechanical restraint. The result of my experience in the management of men, sane or insane, is that the more one trusts in their sense of honour the more easily and pleasantly are they guided. By placing the very large proportion of my patients on *parole* I enhance the value of the comfort and pleasant surroundings of the Asylum, of the kindly treatment and good food, of the amusements and healthy employments; and by inducing a friendly and honourable relationship, founded on a mutual trust in each other, a degree of contentment results as to their lot in at least 95 per cent. of the Asylum population. The odd 5 per cent. desire to escape; but why should I punish the 95 in order to confine the small balance of irreconcilables, the nature of whose disease is such as to render them erratic? Few such cases exist at the present moment in your Asylum, and I trust that they will soon disappear altogether under the “open door” system; they are provided for either by special supervision, or in the case of females, in number 6, which is lockfast. I hold it to be cruelty to apply to the contented majority the maximum of restraint, in order to confine the minority who require its application. Whatever induces self-respect, individuality, or responsibility is productive of a healing or ameliorating influence on the insane. I trust your Board will see the way clear to assist me in developing this system of treatment further, by substituting common handles for locks in the dormitories, as it may from time to time seem expedient.

“ I may mention here another modification in the treatment of *recent* cases, which has been adopted with considerable success during the past year—it consists in discharging, on Lunacy Board sanction, or, on a month's leave of absence granted by myself, patients who,

although convalescent, are by no means mentally sane. When the physical health has been re-established, and the patient evinces a desire for home, or when he or she seems to be lapsing into a demented condition, I believe the proper course to pursue is to try the influence of a return to home. The result of my experience is that such cases have recovered much more rapidly and satisfactorily than others of the same class who have passed their term of convalescence in the Asylum. It may occasionally fail, but a greater degree of harm may be expected from too long, than from too short, detention.

“ In conclusion, I beg to thank you most heartily for your undeviating and kindly support in the management of the Asylum, and trust that you see good reason for still maintaining the general principles on which it is conducted, viz., that its chief function is that of a *curative* hospital for a special class of nervous diseases, to which is superadded the care of chronic cases which cannot fitly be set at liberty; that, being a public establishment, it should exist under the eye of the public, and accordingly is open at all times to the inspection of those who take interest in the general subject of insanity or in particular cases; that the freest communication is permitted between friends and patients; and that the utmost degree of liberty is given to the inmates compatible with their own safety and that of the public.”

OBITUARY.

CALEB WILLIAMS, M.D., F.R.C.S.

On the 5th inst., after an increased illness of a few days, died Dr. Caleb Williams, in the seventy-third year of his age, the oldest member of the medical profession in York. His early professional education was under Dr. Travis, of Scarborough, with whom he remained till he was twenty-one. He afterwards attended the schools of Guy's and St. Thomas's, in London, and spent a short time in those of Paris. At the age of twenty-five he commenced practice in York; in the same year he was chosen as visiting medical officer to the Friends' Retreat, where, assisted by the late Mr. Tuke, he was one of the earliest advocates of the non-restraint system, and more generally enlightened treatment of the insane. On the ground of declining health he resigned this appointment in April, 1871, after having filled it uninterruptedly nearly fifty years. In 1864 he succeeded Dr. Thomas Simpson as consulting physician to the York County Asylum. In 1832 the terrible epidemic of cholera broke out in York. In common with some of his fellow-practitioners, he was faithful to his trust in this severe visitation. For twenty years he occupied the chair of *Materia Medica* and *Therapeutics* in the York School of Medicine. This post he resigned in 1858. The school has since been closed. In addition to his connexion with two institutions, already mentioned, Dr. Wil-

liams was visiting medical officer to two private asylums in the neighbourhood of York. His large experience in the treatment of the insane gave him a widespread reputation, and his aid was sought for from far and near by the friends of this unhappy class. Fifteen years ago Dr. Williams appeared as the advocate of a wider range of the plea of insanity in criminal cases than judges, or jurors, or public opinion were then prepared to admit. In 1856 he made known his opinions, the results of long and careful observation, in a work "On the Criminal Responsibility of the Insane." Recent events have shown that public opinion now adopts wiser and more humane views on this subject. Dr. Williams's course as a practitioner was one of constantly increasing reputation. His skill and judgment in his medical career, of which his success is some guarantee, was united with refinement, courtesy, and gentleness of manner, that made him a favourite with his patients and their friends.

On the 9th inst. his remains were deposited in a vault in the Friends' Cemetery, Heslington-road. The funeral was attended by many members of the medical profession, by many of his fellow-citizens, and his friends from far and near. The large company was addressed by Mr. Isaac Brown, of Kendal, a minister of the Gospel, and an intimate friend of the deceased, and who referred to the Christian course and the bright example of his departed friend.

Dr. Williams has left a son, Mr. Isaac Williams, as his successor, upon whom we sincerely trust the mantle of a beloved and much esteemed father will fall.—*The Lancet*, Nov. 18th.

Books Received.

1. A Manual of Anthropology, or Science of Man, based on Modern Research. By Charles Bray, author of "The Philosophy of Necessity," "Force and its Correlates," "The Education of the Feelings," &c. London: Longmans & Co. 1871.

(*In this work Mr. Bray has brought together, within a small compass, a vast amount of information concerning the wide range of subjects with which he deals. We hope, in our next number, to give a review of his book, which meanwhile we recommend to the attention of our readers.*)

2. Restorative Medicine. The Harveian Oration delivered at the Royal College of Physicians, London, on June 21, 1871. With two Sequels. By Thomas King Chambers, M.D. Philadelphia: Henry C. Lea. 1871.

(*Dr. Chambers has printed and published his Harveian Oration in America, as an offering of love and affection. Considering that the subject of it is chiefly of English interest, we fear it will hardly prove so acceptable an offering as would have been one of Dr. Chambers's former works, all of which have been much appreciated in America.*)

3. Lectures on the Clinical Uses of Electricity. Delivered in University College Hospital. By J. Russell Reynolds, M.D., F.R.S. London : J. and A. Churchill. 1871.
(A republication of three lectures, which first appeared in the pages of the Lancet. They are of a strictly practical character, and cannot fail to be useful to the practitioner.)
 4. On the treatment of Pulmonary Consumption by Hygiene, Climate, and Medicine. By James Henry Bennet, M.D. Second edition. London : J. and A. Churchill. 1871.
(As our experience of diseases increases, says the author, when we have followed its development in several generations of human beings, we learn to take more comprehensive views, to attach less importance to local morbid manifestations, more importance to general laws, to hereditary, constitutional, social, hygienic conditions. It is, after all, to this comprehensive clinical experience of disease that we must appeal in such discussions as the one which is reviewed in this essay.)
 5. Darwinism. Being an Examination of Mr. H. George Mivart's "Genesis of Species." (Reprinted from the North American Review.) By Chauncey Wright, Esq. London : John Murray. 1871.
(Mr. Mivart's book, we think, acquired a reputation beyond its deserts. The religious world was eager to proclaim its merits, because it appeared to it to deal some effective blows against Mr. Darwin, and to shew a way of making science compatible with religious belief. Mr. Chauncey Wright has subjected it to a searching criticism, which we commend to the attention of those who may have attached more weight to some of Mr. Mivart's criticisms than they actually carried.)
 6. Etude Experimentale et Clinique sur l'Alcoolisme. Par le Dr. Magnan, Médecin de Sainte-Anne. Paris. 1871.
 7. Centenary Address delivered before the Society of New York Hospital. By James William Beekman. 1871.
 8. Statistical Report on the Health of the Navy for the year 1869. Ordered by the House of Commons to be printed, July 1871.
 9. Archives of Ophthalmology and Otology, edited and published simultaneously in English and German. By Professor H. Knapp, M.D., New York, and Professor S. Moos, M.D., Heidelberg. Vol. I., Nos. 1 and 2. Vol. II., No. 1.
(It is not within our natural domain to review these Archives, but we have pleasure in calling attention to the appearance of them. They are well printed, and appear to us to meet a want in medical literature. We have gladly placed them on our list of exchanges.)
 10. The Monthly Homœopathic Review. October 1, 1871. Turner and Co., Fleet-street.
(We are not homœopaths, but we have read with pleasure a very philosophical article "on the Relation of Therapeutics to Modern Physiology," by Dr. Henry R. Madden.)
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Appointments.

CARTER, S. H., A.B., M.B., L.R.C.P. Ed., has been appointed Assistant Resident Medical Superintendent of the Bristol Lunatic Asylum, Stapleton.

FOX, J. C., M.B., C.M., has been appointed Assistant Medical Officer at the Staffordshire Lunatic Asylum, Bruntwood, vice H. E. Walker, L.K.Q.C.P.I., resigned.

HUSBAND, W. D., F.R.C.S.E., J.P., has been appointed Visiting and Consulting Medical Officer to The Retreat Lunatic Asylum, York, vice Caleb Williams, M.D., M.R.C.P.L., deceased.

HASARD, J., M.R.C.S.E., has been appointed Assistant Resident Medical Officer to the Berkshire County Lunatic Asylum, Wallingford.

LINDSAY, J. M., M.D., L.R.C.S. Ed., has been appointed Physician-Superintendent of the Derbyshire Lunatic Asylum, Mickleover, vice J. Hitchman, M.D., F.R.C.P.L., F.R.C.S.E., resigned.

LOWE, JOHN, M.B. and C.M. Edin., late Clinical Assistant, West Riding Asylum, Wakefield, has been appointed an Assistant Medical Officer to the Durham County Asylum, Sedgfield, Ferryhill.

MATTERSON, W., M.D., M.R.C.P.L., has been appointed Consulting Physician to the York Lunatic Asylum, vice Caleb Williams, M.D., M.R.C.P.L., deceased.

NEAL, B., L.R.C.P., L.F.P. & S. Glas., has been appointed Assistant Medical Officer to the Cornwall Lunatic Asylum, Bodmin, vice B. G. Derry, L.R.C.P.L., M.R.C.S.E., resigned.

SHANN, G., M.D., F.R.C.P.L., has been appointed Visiting Physician to the Terrace House Lunatic Asylum, Osbaldwick, York, vice Caleb Williams, M.D., M.R.C.P.L., deceased.

WILLIAMS, I. M., M.R.C.S.E., has been appointed Visiting Medical Officer to the Lawrence House Lunatic Asylum, York, vice Caleb Williams, M.D., deceased.

YEATS, W., M.D., has been appointed Assistant Resident Medical Officer at the Cotton-hill Institution for the Insane, near Stafford, vice Turner, resigned.

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